SHASTA COUNTY GENERAL PLAN

As Amended Through October 1995

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SHASTA COUNTY DEPARTMENT OF RESOURCE MANAGEMENT

PLANNING DIVISION
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SHASTA COUNTY GENERAL PLAN

Adopted by Resolution No. 5997
Board of Supervisors January 10, 1984

As Amended Through October 1995
Reprinted November 1996

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SHASTA COUNTY GENERAL PLAN
As Amended Through October 1995

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1.0 INTRODUCTION

1.1 Purpose and Content of a General Plan

Definition

A general plan is an official document adopted by a county or city which sets forth the general, long-range policies regarding how the community's future development should occur. A general plan primarily addresses the use of the privately and publicly owned land resources located within the government's jurisdiction. A general plan is not a detailed, parcel-specific, policy statement. Instead, it establishes a generalized pattern of future land use which provides the basis for more detailed plans.

General plans are required by State planning law which, among its findings states:

The (State) Legislature also finds that decisions involving the future growth of the state, most of which are made and will continue to be made at the local level, should be guided by an effective planning process, including the local general plan, and should proceed within the framework of officially approved statewide goals and policies directed to land use, population growth and distribution, development, open space, resource preservation and utilization, air and water quality, and other related physical, social and economic development factors. (Government Code Section 65030.1)

This statement is supported by five major ideas that provide the conceptual basis for the Shasta County General Plan. These five concepts are described in detail beginning in Section 3.2 of the Plan.

Relation to Existing Land Uses

A general plan will not always reflect the existing land use pattern, and its function should not be confused with that of an existing land use map. An existing land use map is a parcel specific documentation of land uses as they now exist or existed at some other time. In contrast, a general plan describes a generalized and nonparcel-specific land use pattern and it does not represent a particular point in time. Accordingly, existing land uses are not always reflected in a general plan. In some instances, the plan may ignore individual, small scale differences in land use and present a generalized picture which represents the dominant land use character of an area. In other instances, the plan may show the transition of an existing land use to a new, different land use. Finally, the general plan attempts to show land use over a relatively long time period, in this case 20 years.

Relation to Zoning

The General Plan should also not be confused with the zoning ordinance map. A zoning ordinance map is a parcel-specific statement of how lands may be used in the present and the near future. As a legal instrument, the zoning map has immediate force and effect and is one of the key tools in implementing the General Plan's policies. In contrast, the General Plan is a generalized, long-term

statement relating to land use and associated topics. The function of a general plan is to provide a policy framework that must be reflected in the zoning ordinance, specific plans and other development guidelines.

The plan should contain policies governing the location of small scale uses; and it will be necessary to exercise judgment in interpreting these policies. The Plan will not provide automatic, locationally precise answers in all cases, but may require interpretation of plan policies in certain instances.

Time Frame

A general plan looks beyond the present and the immediate future and addresses some reasonable period of time. The Shasta County General Plan reflects a twenty year time period. To provide for flexibility and responsiveness to change, the Plan also requires a comprehensive review and revision at five year intervals. This periodic update will allow the Plan to always maintain at least a 15 to 20 year time frame, as shown in Figure PRE-1.

It must be emphasized that periodic review of the Plan is not synonymous with total overhaul. Once adopted, the Shasta County General Plan establishes a basic policy framework which must be followed. The purpose of reviewing the Plan every five years is to allow it to adjust in response to changing conditions, the availability of more recent planning data, and shifts in community values. Only under the most extraordinary circumstances, such as a major local disaster, a national emergency, or the complete failure over a long span of time to periodically review the Plan, will a thorough and total overhaul be necessary.

Public Policy Statement

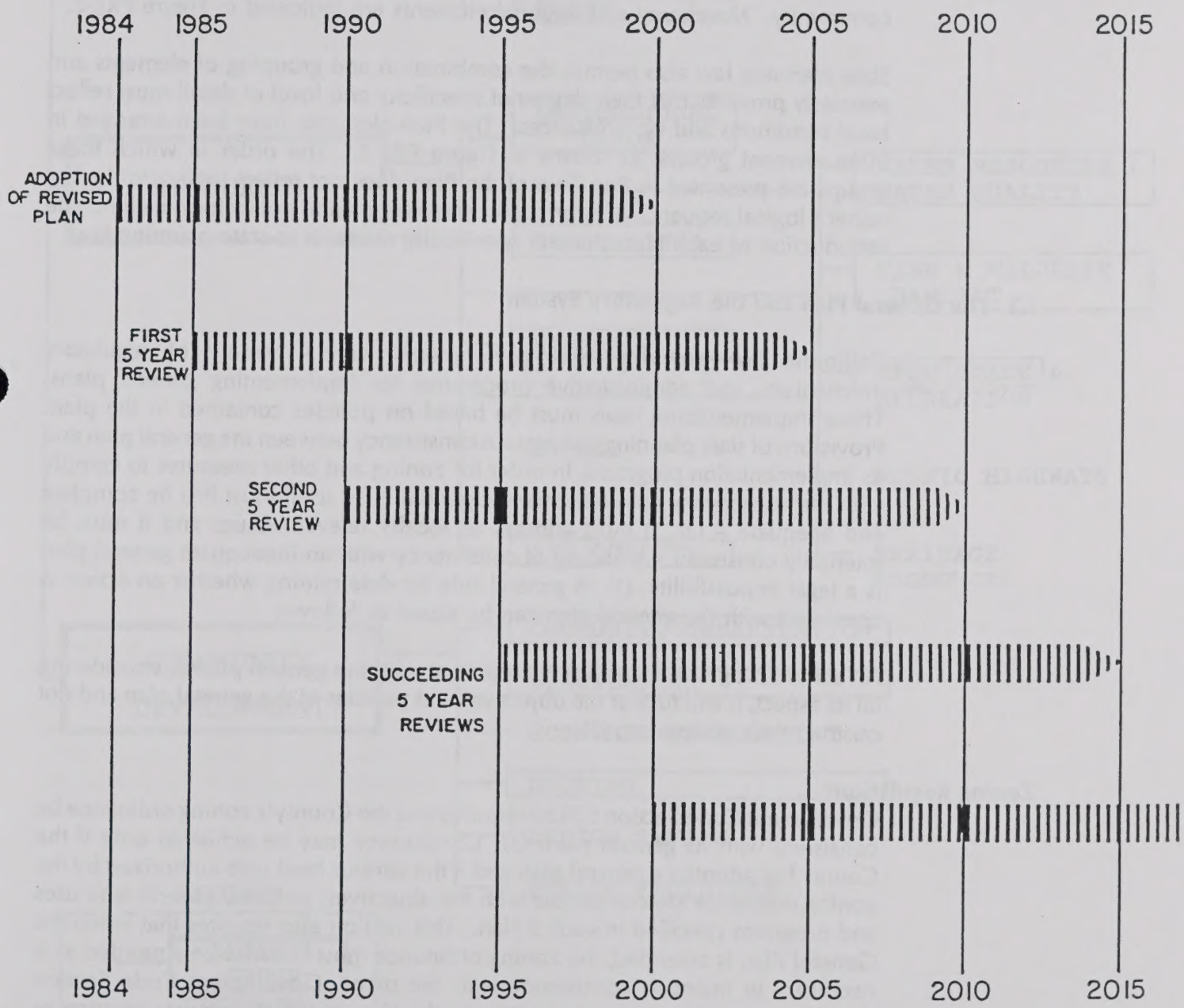
The General Plan is a statement of public policy reflecting the aspirations and values of Shasta County residents which is adopted by their elected representatives. In keeping with California's strong tradition of local government autonomy, the general plan charges the residents of a community with the responsibility to directly decide the particular nature and quality of their immediate living environment. The General Plan is a mechanism by which a community may articulate its values, determine their relative importance, and assess their comparative long-term implications. There are no correct, right, or ideal general plans, but only plans which more or less reflect a particular set of values while meeting standards required by State planning laws. Once adopted, the Plan becomes the basis for day-to-day decisions by elected and appointed officials. By this means, the values reflected in the General Plan shape and form the community and the quality of life sought by its residents.

Citizen Participation

The Shasta County General Plan reflects the participation of citizens serving on the Countywide Planning Advisory Committee (CPAC). After soliciting applications through a self-nominating process, the Board of Supervisors appointed 47 persons to this committee. Its representation included all geographic areas of the County and Countywide interests. Also serving on CPAC were members of the Board of Supervisors and the Planning Commission. Over approximately one year, CPAC held nine meetings at various locations in the County. Minutes of these meetings and attendance records are available from the Planning Division. All meetings were held on Saturday and were well attended.

FIGURE PRE-1

TIME FRAME OF SHASTA COUNTY GENERAL PLAN



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As previously mentioned, five-year updates of the General Plan are to be provided as a way to provide for flexibility and responsiveness to change. Because the five-year review process is not considered an overhaul, or complete rewrite, of the General Plan, its review should be conducted through the normal public hearing process.

Contents

Although a general plan is primarily concerned with land use decisions, land use is intimately related to other subjects which must also be considered in the planning process and the general plan. The subject areas which are addressed by the Shasta County General Plan are diagrammed in Figure PRE-2.

State planning law requires the inclusion of some of these elements in the General Plan and permits the inclusion of other elements at the discretion of the community. Mandatory and optional elements are indicated in Figure PRE-2.

State planning law also permits the combination and grouping of elements and expressly provides that their degree of specificity and level of detail must reflect local conditions and circumstances. The Plan elements have been arranged in three element groups, as shown in Figure PRE-2. The order in which these groups are presented in Part Two of the Plan does not reflect their priority, but rather a logical sequence of information presentation and policy formulation. The introduction to each Plan element specifically relates it to state planning law.

1.2 The General Plan and the Regulatory System

California law provides local governments with a variety of regulatory mechanisms and administrative procedures for implementing general plans. These implementation tools must be based on policies contained in the plan. Provisions of state planning law require consistency between the general plan and its implementation programs. In order for zoning and other measures to comply with the consistency requirements, the general plan itself must first be complete and adequate – i.e., it must address all locally relevant issues and it must be internally consistent. A finding of consistency with an inadequate general plan is a legal impossibility. (1) A general rule for determining whether an action is consistent with the general plan can be stated as follows:

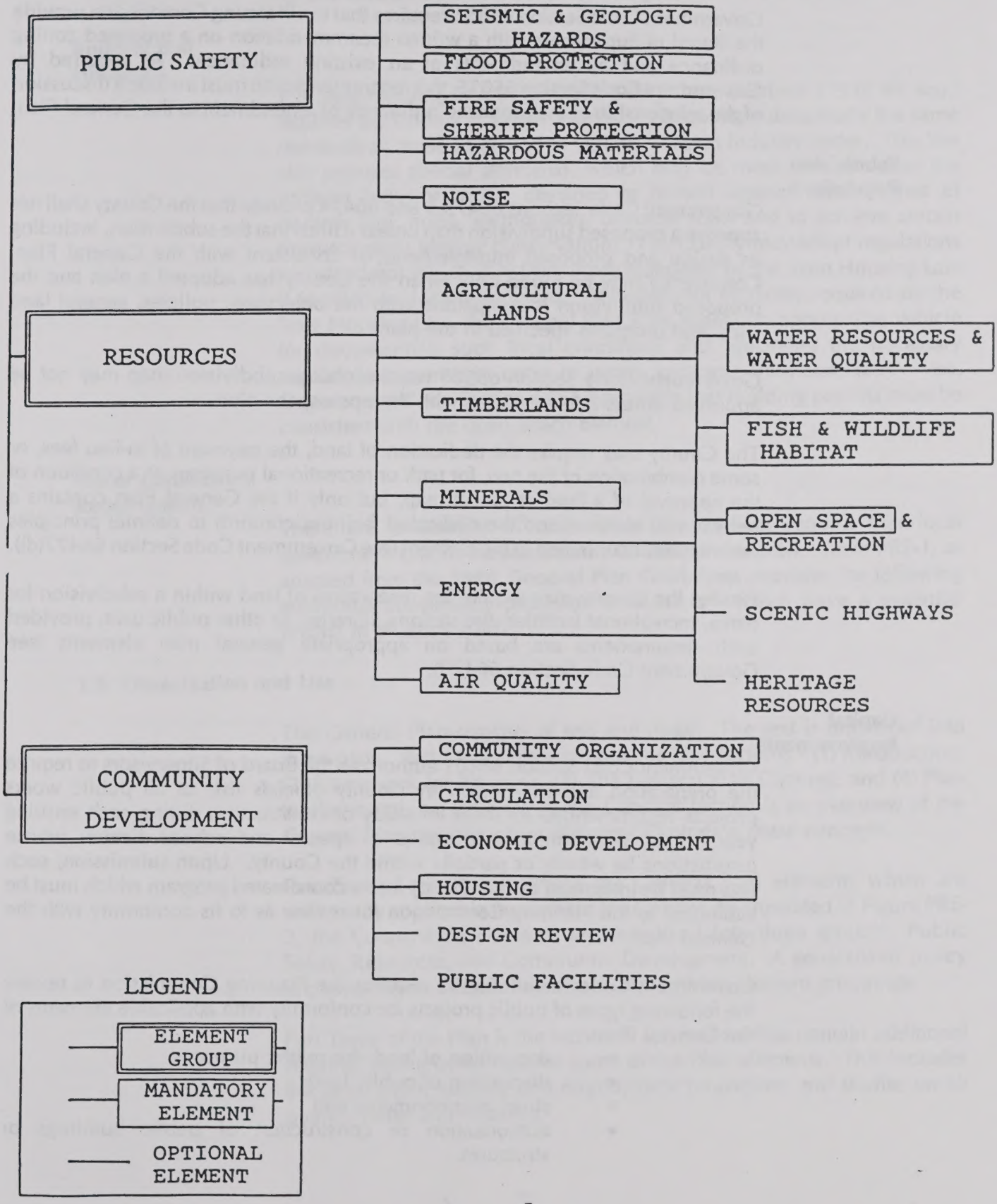
An action, program, or project is consistent with the general plan if, considering all its aspect, it will further the objectives and policies of the general plan and not obstruct their attainment. (2)

Zoning Regulations

Government Code Section 65860 requires that the County's zoning ordinance be consistent with its general plan. (3) Consistency may be achieved only if the County has adopted a general plan and if the various land uses authorized by the zoning ordinance are compatible with the objectives, policies, general land uses and programs specified in such a plan. This section also requires that when the General Plan is amended, the zoning ordinance must likewise be amended as is necessary to maintain consistency with the plan. Government Code Section 65566 requires that any zoning action by the County which acquires, restricts or regulates the use of open-space land or any interest in such land must be consistent with the County's open space

FIGURE – PRE-2

COUNTYWIDE GENERAL PLAN ELEMENTS



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plan. Closely related is Government Code Section 65567 which requires that the County's open space zoning ordinance, the adoption of which is mandated by Government Code Section 65910, also be consistent with the open space plan. Government Code Section 65911 specifies an additional criterion to be applied in granting variances from the terms of an open space zoning ordinance.

Government Code Section 65853 requires that the Planning Commission provide the Board of Supervisors with a written recommendation on a proposed zoning ordinance and all amendments of an existing ordinance. As required by Government Code Section 65855, this recommendation must include a discussion of the relationship of the proposed ordinance or amendment to the General Plan.

Subdivision Regulations

Government Code Sections 66473.5 and 66474 provide that the County shall not approve a proposed subdivision map unless it finds that the subdivision, including its design and proposed improvements, is consistent with the General Plan. Consistency may be found only when the County has adopted a plan and the proposed subdivision is compatible with the objectives, policies, general land uses, and programs specified in the plan.

Government Code Section 65567 requires that a subdivision map may not be approved unless it is consistent with the open space plan.

The County may require the dedication of land, the payment of in-lieu fees, or some combination of the two, for park or recreational purposes as a condition of the approval of a final or parcel map, but only if the General Plan contains a recreational element and the dedicated facilities conform to definite principles and standards contained in the element (see Government Code Section 66477(d)).

Finally, the County may require the reservation of land within a subdivision for parks, recreational facilities, fire stations, libraries, or other public uses, provided such requirements are based on appropriate general plan elements (see Government Code Section 66479).

Capital Improvements

Government Code Section 65401 authorizes the Board of Supervisors to require the preparation and submission by County officials lists of all public works projects recommended by them for study or construction during each ensuing year. This requirement also applies to special and school districts whose jurisdictions lie wholly or partially within the County. Upon submission, such lists must be integrated by the County into a coordinated program which must be submitted to the Planning Commission for review as to its conformity with the General Plan.

Government Code Section 65402 requires the Planning Commission to review the following types of public projects for conformity with applicable elements of the General Plan:

- acquisition of lands for public purposes
- disposition of public lands
- street abandonments and
- authorization or construction of public buildings or structures.

Environmental Impact Procedures

Section 15063(d)(5) of the State CEQA Guidelines requires that the initial study of a project consider whether it is compatible with the General Plan. Section 15125(b) of the Guidelines provides that an EIR must discuss any inconsistencies between the proposed project and the General Plan.

Building and Housing s

The State Housing Law (Health and Safety Code Sections 17910 (et. seq.) requires the County to adopt regulations imposing substantially the same standards as those contained in various uniform industry codes. This law also imposes special standards, which may be more stringent than the uniform industry codes, designed to protect against certain types of hazards (fire, noise, earthquakes, unstable soils) and to achieve certain resource goals (energy conservation). The County may adopt regulations and standards which vary from those mandated by the State Housing Law if justified by local conditions. Although not explicitly required by the State Housing Law, the General Plan is an especially appropriate vehicle for documenting such local conditions and specifying the necessary regulatory response in order to justify variances from state law. Also, Government Code Section 65567 provides that building permits must be consistent with the open space element.

Other Consistency Requirements

There are a number of other State laws which require that local government actions be consistent with the general plan. Table PRE-1, as adapted from the **1990 General Plan Guidelines** provides the following additional consistency provision in State law which have a potential impact in Shasta County:

1.3 Organization and Use

The General Plan consists of text and maps. The text is organized into three parts. Part One - Preface; contains four sections - (1) Introduction; (2) Framework for Planning; (3) The General Plan Concept; and (4) Plan Implementation. Included in the Concept section is an overview of the General Plan concepts, and diagrams illustrating these concepts.

Part Two of the Plan contains the General Plan elements which are universally applicable throughout the County. As illustrated in Figure PRE-2, the Countywide Elements are organized into three groups: Public Safety, Resources, and Community Development. A generalized policy implementation chart follows each of the three element groupings.

Part Three of the Plan is the technical appendices that contain additional required background data for some of the Plan elements. This includes the population, housing and employment projections and studies on air quality, noise and housing.

TABLE PRE-1

GENERAL PLAN CONSISTENCY REQUIREMENTS

Agricultural Preserves

- Government Code Section 51234: requires that agricultural preserves established under the Williamson Act be consistent with the general plan.

- Government Code Section 51282: requires a city or county, when approving a Williamson Act contract cancellation, to make a finding that the proposed alternate use is consistent with the General Plan.

Capital Improvements

- Government Code Sections 65401 and 65402: require planning agencies to review and report on the consistency with the applicable general plan of proposed city, county, and special district capital projects, including acquisition and disposition.

- Government Code Section 65103(c): requires planning agencies to review annually their city or county capital improvement programs and other local agencies' public works projects for consistency with the general plan.

- Friend of B Street v. City of Hayward (1980) 106 Cal. App. 3d988: interprets state law as requiring consistency of governmental capital facilities projects with the general plan.

Development Agreements

- Government Code Section 65867.5: requires development agreements to be consistent with the general plan.

Housing Authority Projects

- Health and Safety Code Section 34326: declares that all housing projects undertaken by housing authorities are subject to local planning and zoning laws.

Integrated Waste Management

- Public Resources Code Section 41701: If a county determines that the existing capacity of a solid waste facility will be exhausted within 15 years or if the county desires additional capacity, then the countywide siting element of the county's hazardous waste management plan must identify an area or areas, consistent with the applicable general plan, for the location of new solid waste transformation or disposal facilities or for the expansion of existing facilities.

- Public Resources Code Section 41702: An area is consistent with the city or county general plan if:
  (1) The city or county has adopted a general plan.
  (2) The area reserved for the new or expanded facility is located in, or coextensive with, a land use area designated or authorized by the applicable general plan for solid waste facilities.
  (3) The adjacent or nearby land use authorized by the applicable general plan is compatible with the establishment or expansion of the solid waste facility.

- Public Resources Code Section 41703: Except as provided in subdivision (a) of Government Code Section 41710, any area or areas identified for the location of a new solid waste transformation or disposal facility shall be located in, coextensive with, or adjacent to a land use area authorized for a solid waste transformation or disposal facility in the applicable city or county general plan.

- Public Resources Code Section 41710(a): A county may tentatively reserve an area or areas for the location of a new or expanded solid waste transformation or disposal facility even though that reservation is inconsistent with the applicable city or county general plan. A reserved area is tentative until it is made consistent with the applicable general plan.

- Public Resources Code Section 41711: A tentatively reserved area shall be removed from the countywide siting element if a city or county fails or has failed to find that the area is consistent with the general plan.

TABLE PRE-1

GENERAL PLAN CONSISTENCY REQUIREMENTS ... Page 2

- Public Resources Code Section 41720: The countywide siting element submitted to the California Integrated Waste Management Board shall include a resolution from each affected city or county stating that any areas identified for the location of a new or expanded solid waste transformation or disposal facility pursuant to Section 41701 is consistent with the applicable general plan.

Interim Classroom Facilities

- Government Code Section 65974(a)(5): Specifies that when local governments obtain the dedication of land, the payment in-lieu thereof, or a combination of both, for interim elementary or high school classroom facilities, such facilities must be consistent with the general plan.

Large Scale Urban Development Projects

- Health and Safety Code Section 56032: requires that comprehensive development plans for large-scale urban development projects be consistent with the general plan.

Low and Moderate Income Housing

- Government Code Section 65589.5(d): A city or county may disapprove a low or moderate-income housing project if the jurisdiction finds that the development is inconsistent with the general plan land use designation, as specified in any element of the plan.

Mineral Resources

- Public Resources Code Section 2763: requires that city and county land use decisions affecting areas with minerals of regional or statewide significance be consistent with mineral resource management policies in the general plan.

On-Site Wastewater Disposal Zones

- Health and Safety Code Section 6965: requires a finding that the operation of an on-site wastewater disposal zone created under Health and Safety Code Sections 6950 et seq. will not result in land uses that are inconsistent with the applicable general plan.

Open Space

- Government Code Section 65566: requires that acquisition, disposal, restriction, or regulation of open-space land by a city or county be consistent with the open-space element of the general plan.

- Government Code Section 65910: specifies that every city and county must adopt an open-space zoning ordinance consistent with the open-space element of the general plan.

- Government Code Section 51084: requires cities and counties accepting or approving an open-space easement to make a finding that preservation of the open-space land is consistent with the general plan.

Park Dedications

- Government Code Section 66477: enables local governments to require as a condition of subdivision and parcel map approval the dedication of land or a payment of fees for parks and recreational purposes if the parks and recreational facilities are consistent with adopted general or specific plan policies and standards.

Project Review

- Title 14, California Code of Regulations, Section 150809 (refer to CEQA Guidelines): requires examination of projects subject to the provisions of the California Environmental Quality Act for consistency with the general plan.

- Health and Safety Code Section 33331: requires every redevelopment plan to conform to the adopted general plan.

Reservations of Land Within Subdivisions

- Government Code Section 66479: specifies that reservations of land for parks, recreational facilities, fire stations, libraries, and other public uses within a subdivision must conform to the general plan.

TABLE PRE-1

GENERAL PLAN CONSISTENCY REQUIREMENTS ... page 3

Special Housing Programs

- Health and Safety Code Section 50689.5: specifies that housing and housing programs developed under Health and Safety Code Sections 50680 et seq. for the developmentally disabled, mentally disordered, and physically disabled must be consistent with the housing element of the general plan.

Specific Plans

- Government Code Section 65359: requires that a specific plan be reviewed and amended as necessary to make it consistent with the applicable general plan.

- Government Code Section 65454: specifies that a specific plan may not be adopted or amended unless the proposed plan is consistent with the general plan.

Street, Highway and Service Easement Abandonments

- Streets and Highways Code Section 8313: specifies that prior to vacating a street, highway, or public service easement, the legislative body must consider applicable general plan consistency.

Transmission Lines

- Public Utilities Code Section 12808.5: requires cities and counties approving electrical transmission and distribution lines of municipal utility districts to make a finding concerning the consistency of the lines with the general plan.

Use Permits

- Neighborhood Action Group v. County of Calaveras (1984) 156 Cal. App.3d 1175, provides that use permits (but not exclusively such permits) must be consistent with the local general plan. While state statutes do not expressly require such consistency, it follows that such consistency is nevertheless required, since use permits are struck from the mold of local zoning, and zoning must conform to the adopted general plan.

Source: General Plan Guidelines 1991

In addition to these parts of the Plan, another document is available which contains the background reports and data used to develop the Plan including the EIR, but which is not required to be a part of the Plan.

Key Terms

Certain key terms are used repeatedly throughout the text and their meaning is required in order to use the Plan. These key terms are described below.

A **goal** is a broad, generalized expression of commonly held community values. Since a goal is broadly stated, disagreement regarding it tends to be uncommon. **Objectives** are similar to goals and frequently the two terms are used interchangeably. As used in the General Plan, however, an objective is a more narrowly drawn and concrete expression of community intent. One goal may imply two or more objectives, each responsive to a particular aspect of a more broadly stated goal. For example, a community goal might be "Protection of natural resources." A related objective could be "Prevention of erosion which leads to loss of soils, degradation of water quality, and destruction of wildlife habitats." Other objectives related to this goal might address air quality, nonrenewable energy resources, prime agricultural lands, to cite a few.

A **policy** is a precise statement of how public regulatory powers and fiscal resources will be exercised and allocated to achieve a specific objective. Policies may be expressed in text, maps, diagrams, or some combination thereof. Since they are tangible, they often can be quantitatively measured. It is important to note that some polices are more specific than others. Examples of polices relating to the previous examples of goal and objective include, "Construction practices shall provide for the impoundment of storm waters and removal of sediment prior to discharge into creeks," and "Development shall not be permitted on highly erosive soils when slopes exceed 15%" (or some other specified limit).

The policies contained in the Plan are expressed in terms of **shall** or **should**. There is an important distinction between these two terms. As used in the Plan, shall indicates an unequivocal commitment, while should indicates a guide toward accomplishing a long range goal.

The final link in the chain running from an objective to its physical realization is provided by **implementation**. Although implementation is commonly spoken of in terms of programs implying a long-term effort, it may be of much shorter duration and simply be referred to as a measure. In any event, implementation programs and measures are concerned with the specific actions necessary for accomplishment within a definite time. Examples of implementation programs include revision of the zoning and grading ordinances or the development standards.

Footnotes:

1. 1990 General Plan Guidelines, pg. 211 (See 58 Ops.Cal.Atty.Gen.21,24 (1975) and Neighborhood Action Group v. County of Calaveras (1984) 156 Cal.App.3d 1176, 1184)

2. Ibid, pg. 212

3. Unless otherwise indicated all references are to the Government Code.

2.0 FRAMEWORK FOR PLANNING

The following discussion briefly outlines the framework for the development and utilization of the Shasta County General Plan. Four interlocking components form this framework. They are:

- the natural environment
- the man-made or built environment
- the institutional environment and
- the potential for environmental change.

The term "framework for planning" is used here because these four elements define basic planning opportunities and constraints which must be addressed by the Shasta County General Plan. Understanding and intelligently responding to this planning framework is essential to the short and long-term success of the General Plan. The discussion below provides an introduction to the more detailed treatment of the components of this framework in the various Plan elements.

2.1 Natural Environment

The natural environment includes all factors in man's surroundings that are the product of natural rather than man-made forces and interactions. Major factors of the natural environment are:

- landforms
- water
- climate
- minerals
- soils
- vegetation, and
- wildlife.

These factors are fundamental to the planning framework because they define the limits within which the man-made and institutional environments must operate.

Landforms

Shasta County is situated where the Central Valley of California meets the convergence of the Klamath and Coastal Mountain Ranges to the northwest and west, with the Cascade Mountain Range to the northeast and east. Elevations in the Central Valley area of Shasta County range between 400 and 700 feet. The Cascade Range divides the Central or Sacramento Valley region of the County from the Modoc Plateau situated in its northeast corner. In the interest of using common nomenclature, the Modoc Plateau will be referred to as the Fall River Valley. Approximate elevation of this valley is 3,300 feet.

Water

The landforms of Shasta County and their underlying geology exert a major influence on its surface and groundwater resources. The Central Valley and its southward flowing Sacramento River provide the drainage for all the major streams in the County - Squaw, Clear, Cow, Cottonwood, Battle, Clover, Bear, and Hat Creeks, and the Pit, Fall, and McCloud Rivers. Alluvium deposits in the Sacramento and Fall River Valleys define the only significant groundwater basins present in Shasta County; but there are also numerous "hard rock" groundwater basins of unknown productivity.

Climate

The landforms of Shasta County also play a role in determining its climate. The convergence of the mountains on either side of the Central Valley forms a funnel that concentrates precipitation near the upper end of the valley in periods of winter storms marked by south winds. The western mountains receive significant amounts of rain from air moving eastward off the Pacific, while the eastern mountains generally receive less precipitation. Temperature is closely related to elevation, with the warmest temperatures at lower levels. The length of the growing season also reflects this temperature pattern. Comparing the climates of the two major valley areas of the County, the Central or Sacramento Valley experiences a longer growing season and more rainfall than the Fall River Valley.

The two valley areas are located within different air quality basins: the Sacramento Valley Air Basin and the Northeast Plateau Air Basin. In the Sacramento Valley Basin, the potential for strong winter radiation inversions is high, resulting in stable atmospheric conditions.

Minerals

Shasta County is rich in mineral resources, including copper, gold, silver, zinc, sand and gravel, and diatomite. Most of the metallic ore lies in western Shasta County. Sand and gravel deposits are associated with the Sacramento River and its tributaries. The junction of the Pit River and Hat Creek in northeastern Shasta County is the location of diatomite deposits.

Soils

Landform, climate, and other factors determine soil characteristics. Soil surveys of Shasta County cover areas outside of the National Forests and use a standard classification system ranging from Class I, soils with few limitations, to Class VIII, soils with limitations precluding their use for commercial agricultural purposes. Of those areas of the County which have been surveyed, the majority are Class III and worse. Areas with Class I or II soils are located almost exclusively in the Sacramento and Fall River Valleys.

Vegetation

Landform, climate, soils and other factors are responsible for the natural vegetative cover of Shasta County. Coniferous forest is the predominant vegetation in the mountainous regions of the County, but in many areas this cover has been modified by man's activities. Extensive man-caused modification has also occurred in the Sacramento and Fall River Valleys. These areas are characterized by cultivated and pasture lands, oak woodlands, and grasslands. Rare and endangered plant species are found in Shasta County.

Wildlife

The major wildlife resources of the County include deer, waterfowl and fish. Man's activities have also resulted in modifications in their habitat areas and thus their geographic distribution throughout the County. Deer winter range areas are found outside the Sacramento and Fall River Valleys in the lower elevations of the mountain areas of the County. The lower Sacramento River and lower Clear, Cottonwood, and Battle Creeks are important salmon and steelhead areas. Excellent trout streams include the Sacramento below Keswick Dam, McCloud, Pit, Fall and Rising Rivers and Squaw, Kosk, Cow, Hat, Hatchet and Battle Creeks. The Fall and Sacramento Rivers are also major waterfowl habitat areas. There are numerous and rare endangered animal species known to inhabit Shasta County. The premier trout fishery and habitat corridor of the upper Sacramento River will take a number of years to heal as a result of the July, 1991 pesticide spill from a Southern Pacific train, assuming that no further major spills occur which seriously pollute this section of river.

2.2 Man-made Environment

The man-made environment is defined as physical modification of the natural environment caused by man. Major factors of the man-made environment are:

- urban/suburban and rural residential areas
- transportation networks
- water impoundments and
- cultivated areas.

Urbanized Areas

The areas of Shasta County which are the locations of urban and suburban development correspond closely to where the natural factors of landform, water, climate and soils provide opportunities for human habitation. Urbanization and its associated suburban development has occurred in the Sacramento, Fall River, and Burney Valleys where the level topography and soil conditions allow the relatively easy construction of residential, commercial, industrial, and other urban structures and their street circulation systems; surface and groundwater are available for urban water supply systems; and climatic, soil, and surface water conditions permit the construction of some type of urban wastewater treatment system.

Based on 1990 U. S. Census information, Approximately 84 percent of the County's population lives in the Sacramento Valley area of the County in a north-south band of urban and suburban communities that include the Shasta Dam Area (Central Valley, Summit City, Project City, and Pine Grove), the incorporated cities of Redding and Anderson, and the unincorporated community of Cottonwood. Around this urban and suburban core are several smaller communities including Mountain Gate, Jones Valley, Bella Vista, Palo Cedro, Happy Valley, Centerville, and the Shasta/Keswick area. Approximately 5.5 percent of the County population live in unincorporated urban and suburban and rural communities in northeast Shasta County. These communities include Burney/Johnson Park, Fall River Mills/McArthur, Cassel, and Hat Creek.

Combined, the Sacramento Valley area and the northeast portion of the County account for nearly 90 percent of the County population and represent the region's major public and private investments in the facilities and services required by urban development.

Transportation Network

The major element of the transportation network of Shasta County is the regional north-south transportation corridor through the Sacramento Valley. Contained within this corridor are Interstate 5, the Southern Pacific Railroad, Redding Municipal Airport, and hydroelectric power transmission lines. It must be noted that this corridor is a link in a much larger corridor running the entire length of the west coast through the United States from southwest Canada to northwest Mexico and connecting many metropolitan areas in California, Oregon, and Washington. Events occurring in these other areas will be transmitted via this north-south corridor and will inevitably affect Shasta County in general and its Sacramento Valley hinterland, in particular.

The other major elements of the transportation network are State Route 299E connecting the Sacramento and Fall River Valleys; State Route 44 connecting the Sacramento Valley with Lassen Volcanic National Park; and State Route 89 which links the Park with the Fall River Valley. In general, this transportation network does and will continue to reflect factors in the natural environment, most directly topography and climate.

Water Improvements

Many of the surface water resources of Shasta County have been impounded by man for a variety of purposes, including flood control, power generation, domestic and agricultural water supply, and recreation. The dominant natural factors here are surface water and topography. Major improvements and associated facilities are Shasta Lake, Whiskeytown Lake, the Anderson-Cottonwood Irrigation District (ACID) Diversion Dam and canal, Keswick Lake, the Pit River Dams, Lake McCloud and Big Lake. There are approximately 325 smaller reservoirs throughout the County.

Cultivated Areas

Cultivated areas of the County are defined as areas where man has altered the natural environment to produce food, fiber, and building materials. Cropland areas of the County are generally limited to the Sacramento and Fall River Valley areas and to the irrigated meadows of the Cascade Range. The Western and Eastern Upland areas located on either side of the Sacramento Valley are grazing areas. Timber harvesting is concentrated in the mountain areas.

Interaction of Natural and Man-made Environments

The physical interactions between factors of the natural and man-made environments provide the dynamics of the planning process. In order for this process to result in a successful plan, the nature of these interactions must be understood. Failure to achieve this understanding and then apply it to the planning process could result in a plan which is costly to implement, both to the private and public sectors, or creates an undesirable living environment at the expense of the natural environment, or both. It is the institutional environment of Shasta County, discussed below, which provides the context for reaching decisions concerning these relationships.

2.3 Institutional Environment

The factors of the institutional environment may be categorized as:

- social
- economic
- governmental

The following discussion of these categories focuses on the role of the institutions as mechanisms for formulating and expressing values regarding the use of the natural environment through the development of the man-made environment.

Social

The primary social factors of Shasta County are the family, the community organization, the workplace, the school, and the religious group. Frequently, various elements of these institutions overlap and their order of importance will vary from individual to individual. These institutions reflect fundamental social values which find expression in the types of communities and lifestyles desired by County residents. These desires have significant land use implications. These desires will vary from person to person according to age, income, education, recent residency, and other factors.

Economic

The economy of Shasta County is based on the natural environment and external economic influences and trends. Forest product harvesting and manufacturing, agriculture, and tourism are the major base industries of the County. An industry which is also based on the natural environment and is of major consequence, is the division of land into lots for subsequent sale and eventual development. Given their dependence on the natural environment, each of these industries has a vested interest in its future. A key distinction, however, is that forestry, agriculture and tourism use the natural environment as a renewable resource, while the land division industry treats the natural environment as a consumable resource. This distinction also has critical land use planning and environmental implications.

Governmental

Government provides a mechanism for reconciling competing interests regarding the use of the natural environment. In Shasta County, government operates at three levels - local, state, and federal.

At the local government level, the key actors are Shasta County and the incorporated cities of Anderson and Redding. These are general, as opposed to special purpose local governments, and they have direct legal authority over the planning and regulation of the use of lands within their jurisdiction. To an important degree, the planning and regulatory actions of the County and the two cities are dependent on the activities of special purpose local government agencies which indirectly affect land use decisions through the provision of services, such as water, sewer, or streets.

The state government operates at two different levels in Shasta County. One level is the exercise of direct control over lands it owns within the County, such as parks, wilderness areas, submerged lands subject to the public trust doctrine, and other resource and recreational facilities. The other, more active level operates through various state agencies concerned with transportation planning, air and water quality, solid waste management, hazardous and toxic materials, water resources, fish and wildlife resources, and coordination of state planning law through adoption of local general plans.

The federal government is a major landowner in Shasta County and these lands make major contributions to the agricultural, forest, and tourist industries. Therefore, federal policy regarding these lands has important implications for the economy of the County.

Interaction of Natural, Man-made, and Institutional Environments

The natural, man-made, and institutional environments define the overall framework within which the Shasta County General Plan must operate. The natural and man-made environments are concerned with the physical pattern of land use as the result of the interaction of natural and man-made factors. The institutional environment assigns values to these factors and provides a process for their concrete application in defining and achieving a desirable land use pattern. However, these interrelationships and environments are not static and will change over time.

2.4 Potential for Environmental Change

The planning framework for Shasta County will change in response to changes to the natural, man-made, and institutional environments. Some events may have a greater potential to impact the rate of environmental change than that now forecast for Shasta County. In any case, the most common barometer to assess the relative magnitude of environmental change is by reviewing the General Plan forecast of population growth.

The following discussion provides an outline of the assumptions which support the County's anticipated population growth to year 2010, and beyond. The population growth discussion is followed by the presentation of ten (10) local factors which will be influential to change in Shasta County during the next twenty (20) years and beyond. The General Plan does not directly consider influences from larger events, such as major lifestyle changes caused by new technologies, changing economic structures and conditions, global atmospheric changes, immigration policy or other large scale environmental or social factors.

Population Growth

The General Plan assumes that the population of Shasta County will continue to increase; therefore the main issue is by how much, where and at what rate. Resolution of this issue will depend on many factors which do not lend themselves to precise prediction. For example, will retired persons continue to migrate to Shasta County and will the County continue to provide a refuge to families and individuals seeking to escape the deteriorating environment of California's major metropolitan areas. If these and other trends continue, the long-term rate of population growth could be rapid with the County's population potentially doubling in approximately 25 to 30 years. On the other hand, it may be that population growth will level off with a slower rate over the next two decades due to significant social, economic or environmental changes. Given these alternatives, it is possible to construct several population projections for Shasta County. These projections involve "high" and "low" forecasts, as well as utilization of a "middle" projection made by the California Department of Finance (DOF). These three projections are shown in Figure PRE-3. The DOF projection has proven to be the most accurate during the 1980's, as shown by Figure PRE-3. Therefore, the middle DOF projection should be considered the most accurate for use in long-range planning discussions. The "high" and "low" projections should be considered the extreme limits to the range in which the County's population forecast could vary. The technical basis for the "high" and "low" projections is described in Appendix A.

The land use implications of population growth are both obvious and, at the same time, very complex. More people means that undeveloped and under-utilized lands will need to be developed to provide sites for housing, employment, roads and public facilities. To ensure that too much rather than too little land will be made available for these purposes, the Plan is based on the higher population projection. The correlation of population growth forecasts with the allocation of planned land use patterns needs to be carefully considered so that a large enough supply of land is available for the increasing population. But, as will be repeated many times throughout the Plan, actual population growth may fall short or exceed this projection. Accordingly the Plan incorporates a mechanism, described in the introduction to Part One, for periodically reviewing and adjusting the Plan in response to actual growth.

1. Ability to Maintain Quality of Life

The General Plan refers to a need to maintain the "quality of life" in Shasta County. Although this term is subjective, it summarizes a number of ideas that the Shasta County community believes to be amenities found in the region. In its most fundamental sense, quality of life is the community's combined idea of what makes Shasta County a desirable place to live, including the make-up of its social and natural environment. Much of what are considered quality of life issues are based on comparisons with other areas; such as better air quality, schools, civic and cultural opportunities, recreation and outdoor resources along with less crime, traffic and congestion, water pollution and cost for housing. Maintenance and improvement of the County's quality of life is a key concept and basis of the Plan. A serious decline or erosion in the quality of life would potentially impact many other key elements contained in the Plan. On the other hand, successful efforts to guide population growth and economic development in a manner that encourages a sense of community while protecting cultural and natural resources can act to offset perceived declines in the quality of life.

2. Economic Growth in I-5 Corridor

The General Plan implicitly assumes the expansion of the local economy to accommodate the County's projected population growth. Most of this growth will occur adjacent to the interstate transportation corridor in the Sacramento Valley region of Shasta County. This corridor offers rail, air, and highway transportation access to major market areas; has, or potentially has, ample land, water supply, and wastewater disposal resources; and could accommodate substantial housing growth; and is located in an attractive environment. Economic growth within this corridor during the next twenty years could exceed the assumed level and result in a much higher population growth. Economic and population growth within this corridor should be closely monitored so the Plan will be able to adapt to the realization of this potential.

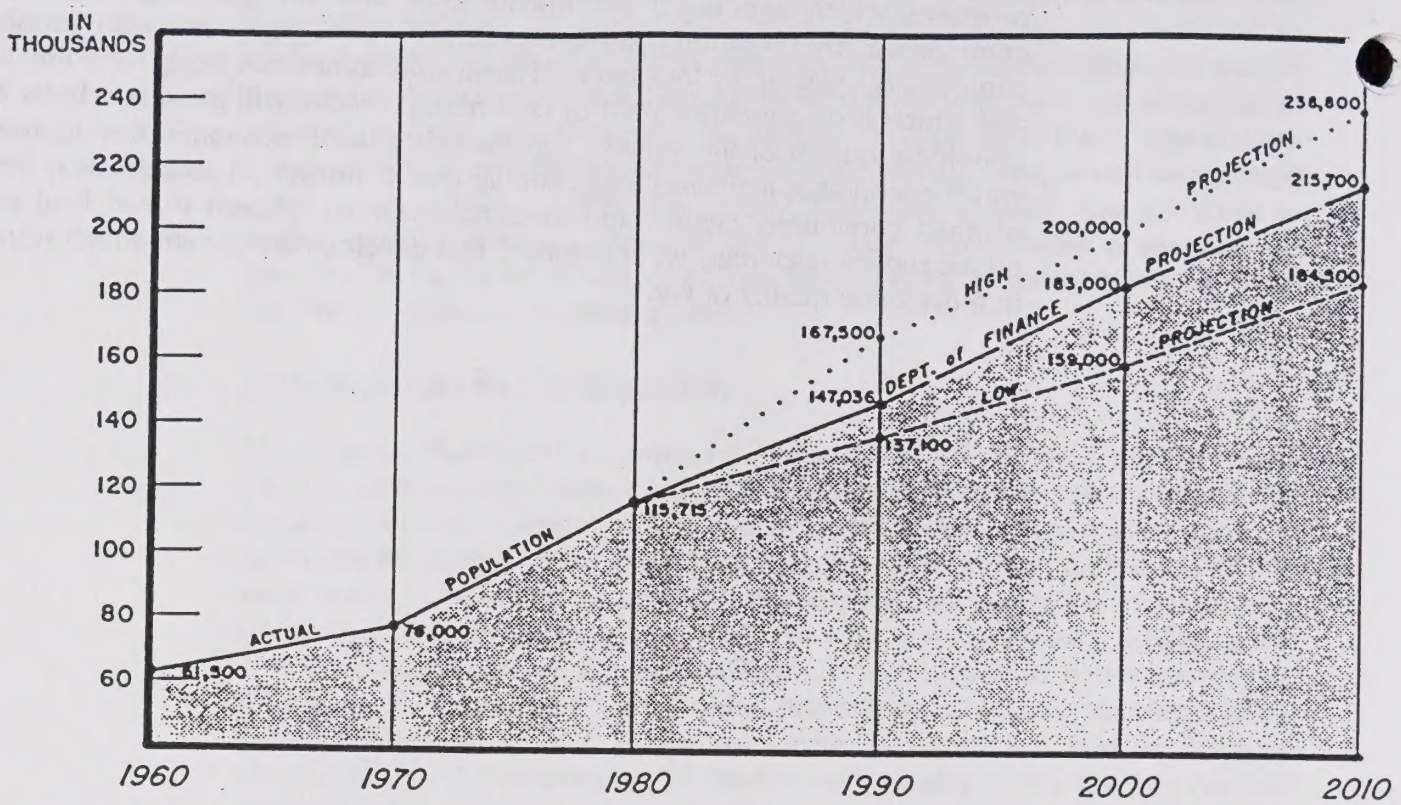
3. Economic Development and the Pattern of Urbanization

In addition to the external economic influences brought by the I-5 transportation corridor, economic expansion and development will also be influenced by local planning and incentive programs. The success of the area's redevelopment agencies, enterprize zone and other revitalization and promotional efforts will be

measured, in part, on how well these programs are able to encourage a pattern of development that meets quality of life objectives. Economic development programs which encourage the maintenance and strengthening of existing communities by promoting job diversity, pay scales consistent with housing affordability, geographic location consistent with community design and identity and which promote enrichment of community centers will provide a basis for upholding quality of life values. On the other hand, economic development which encourages increased traffic and air quality impacts, is located away from planned community centers and does not promote efficient use of land and public service resources, will contribute to a development pattern which results in a declining quality of life.

FIGURE PRE-3

Actual and Projected Population Growth 1990—2010



SOURCE: SHASTA COUNTY DEVELOPMENT SERVICES DEPT. — PLANNING DIVISION 1991

Incorporated vs. Unincorporated Population

	1970	1980	1990
City of Anderson	5,492	7,281	8,299
City of Redding	16,659	41,995	66,462
Unincorporated	55,489	66,339	72,275
Total County	78,000	115,715	147,036

Notes: 1. Population figures to 1980 are from the U. S. Census and represent the population of the entire County, including its incorporated cities. The 1990 Census reported 137,036 persons in the County.

2. The California Department of Finance (DOF) Report 86-P-3 forecasted the County's 1990 population to be 148,100. DOF's year 2000 forecast results from Report 91-P-1. The 215,700 DOF projection is a linear extrapolation from its 2000 to 2005 forecast based on Report 91-P-1.

3. High and low projections are linear extrapolations from rates forecasted between 1990 and 2000 based on data developed in General Plan Appendix A.

YEARLY GROWTH RATES AND DOUBLING TIME

Growth Rate	Years to Double Population
1%	69.66
2%	35.00
3%	23.45
4%	17.67
5%	14.21
6%	11.90
7%	10.24
8%	9.01

4. Auto Travel and Tourism

The tourist industry of Shasta County is dependent on the automobile to bring people to its recreation resources. It is difficult to forecast both the cost and availability of gasoline at any given point in the future, however sharp changes in the supply and price of motor vehicle fuels have distinct impacts on recreational travel. The planning implication is that a decline in the County's traditional outdoor recreation tourist industry would require expansion of other areas of the County's economy and accompanying land use commitments to maintain economic stability.

5. Higher Education Facility

As the population of the northern Sacramento Valley increases, the need for an additional four-year university will increase. Some work towards this end occurred during the late 1980's. The impact of a moderate size four-year university in the Shasta County area may cause additional growth beyond that projected in the General Plan, but could bring many community-wide benefits, if well planned and located. With special studies and the availability of developable land which meets the siting criteria for a four-year university, the South Central Region of Shasta County offers potential for such an educational institution in the long term.

6. Continued Expansion of Service/Retail Sales Oriented Economy

During the last several decades, the County's economy has been marked by a steady increase in service and retail trade employment while government and manufacturing jobs have declined in their relative importance to the region's overall economy. For example, from 1972 to 1990, service jobs increased from 17.1% to 24.2% of countywide employment, retail trade increased from 16.6% to 21.6% while government declined from 26.1% down to 18.5% and manufacturing declined from 18.4% down to 9.8% of the area's employment.(1) Overall, these four sectors have accounted for about three-fourths of the County's employment.

While some of this trend can be attributed to national and statewide trends towards a service and retail sales oriented economy and a decline in basic manufacturing industries, Shasta County's trend towards heavy reliance on the service/retail sales sectors is due, in large part, on several decades of population growth highlighted by strong in-migration of "equity refugees" primarily from California's major urban regions. In response to this in-migration has come demands for increased professional services such as medical care, and all forms of retail sales and their support services.

This trend provides for a two tiered system of wages and salaries; namely better paying professional services jobs and low paying jobs in the retail sales sector. In both cases, the continued expansion of these employment sectors is closely related to the County's growth rate and state and national economic trends. The trend towards continued increase of the service/retail sales sectors should be closely monitored to better gauge the relationship to overall population growth and housing affordability in the area.

7. Development of Energy Resources

Shasta County has experienced significant development of its hydroelectric energy resources and this development has played a major role in shaping the existing land use pattern of the County. The potential of other energy resources in the County, including geothermal, biomass and low-head or small-scale hydroelectric have been actively explored by major energy companies. Most of these exploration programs are of a proprietary nature and detailed information is generally unavailable. Development of the renewable and nonrenewable energy resources of Shasta County at this level could have a note-worthy impact on the County's economic and development pattern.

8. Additional Water Project Development

In recent years, a number of Shasta County water purveyors have been forced to restrict water deliveries due to the combination of persistent drought conditions and increased service connections within their service areas. Most of these purveyors have relied on temporary interagency water transfers and groundwater during times of shortage. The long term implications are that, despite Shasta County's normally abundant water resources, the area is not immune from water shortfalls that may hinder the ability to serve its expanding population. Over the longer term, it will become increasingly important for Shasta County water purveyors to seek ways to provide more secure water supplies.

9. Revitalization of Natural Resource Based Industries

The last several decades in Shasta County have been marked by steady declines or lack of vitality in key natural resource industries based on timber, agriculture and fish and wildlife habitat. Also, mining is a historically important resource industry in the County. These declines have prompted major concerns and varying efforts to address their respective revitalization.

Revitalization of the timber industry will be dependent on reconciling forest management practices with ever-growing environmental concerns which blossomed during the 1980's. Also, the success of efforts to develop specialized wood products and related manufacturing industries will prove important to revitalization efforts in the timber industry. Although agriculture has remained important to Shasta County, it role has declined in proportion to expansion of other sectors in the economy. Over the long term, agriculture could become more important due to: (1) continued cumulative losses of agricultural land elsewhere in California due to urbanization, salinization, and water shortages; and (2) increasing demand for specialized direct marketing of agricultural products. Maintaining and enhancing quality fish and wildlife habitat are critical to the recreation and tourism industry, and continued declines of these resources would further impact this troubled industry. Efforts to protect and restore these habitats will be important indicators in measuring the long term viability of the tourism and recreation industry.

From the origins of Shasta County until the end of World War I, mining was the major industry. Major reasons for the decline of mineral extraction were changes in the international economics of this industry and regulation and litigation

resulting from adverse environmental impacts. Changes in the world economy and the development of new extractive technologies designed to help mitigate these impacts increase the possibility for a revival of the mineral industry. The General Plan should recognize this potential and be capable of responding to its land use and environmental implications.

10. Fiscal Impacts on Federal, State and Local Government

Since the 1980's, the County has been faced with repeated budget shortfalls caused by increasing service demands and reduced proportions of discretionary revenue. Part of this problem is caused by a serious structural problem in how California supports state mandated programs forced upon its county governments. These state mandated programs have forced increasing amounts and rates of local discretionary revenues to be spent in principally two rapid growth areas, namely; social services, including welfare, and criminal justice; at the expense of direct property related services such as emergency services and land use planning. Also, increasing state and federal mandates on education have adversely impacted schools districts' ability to maintain adequate revenue to pay for new service requirements. Generally, budget shortfalls have been most serious during periods of slowed economic growth which have corresponded to significant budget cutbacks or new mandates from federal or state government. This situation has left a number of counties in an uncertain and unstable fiscal environment. One implication of such budget uncertainties will be the need to heighten understanding of both the positive and negative fiscal impacts which result from growth and development activities which are enabled by the General Plan, including the nature and character of population growth and development.

2.5 General Plan as a Response to Change

The previous discussion of the planning framework of the General Plan concluded with a brief discussion of how this framework could change over time. The purpose of this discussion was to identify factors or subjects which currently appear to pose the greatest potential for changing this framework. Over time some of these factors should be deleted from this list and others added. One should not lose sight of the fact that the General Plan offers a means of anticipating changes before they occur and responding to them in a way which minimizes their adverse impacts and enhances their benefits. While the alternative of responding to change after it occurs is available, experience in Shasta County and elsewhere demonstrates that this is not a desirable alternative.

Footnotes:

1. Annual Planning Information for the Redding Metropolitan Statistical Area, California Employment Development Department, June, 1991.

3.0 THE GENERAL PLAN CONCEPT

This chapter describes the major ideas and proposals implicit in the objectives contained in each element of the Plan.

3.1 Objective

The objectives of the General Plan are statements of community values regarding the future growth, development, and quality of life in Shasta County. Inclusion of these objectives in the Plan and the adoption of the Plan by the Board of Supervisors represents a commitment to the use of these objectives to guide future land use and land use related decisions in Shasta County. The Plan recognizes, however, that community values may change over time in response to events within and outside Shasta County. Accordingly, the Plan incorporates a mechanism for the periodic review, evaluation, and, if appropriate, revision of these objectives. The availability of this opportunity for future revision of the objectives should not weaken the long-term commitment implicit in the Plan objectives.

The objectives of the General Plan were formulated through a broad-based citizen participation effort representative of the wide range of perspectives and interests present in the County. A questionnaire and group discussion of planning issues were used to develop a preliminary statement of objectives which was reviewed by the Countywide Planning Advisory Committee (CPAC) and revised in response to comments.

The planning objectives contained in each element of the Plan provide the foundation for the overall concept of the General Plan which is described in this chapter. These objectives also provide the basis for the policies. All of the objectives are closely interrelated and these relationships require that they be applied comprehensively in making planning decisions.

3.2 Description of the Plan Concept

In comprehensively looking at the objectives, the relationships among them emerge in the form of major ideas or concepts. Many of these concepts can be expressed graphically as well as textually. This section of the Plan describes these major concepts and where possible uses maps or graphics to illustrate them. Taken as a whole, these concepts provide a summary or overview of what the Plan is attempting to accomplish and why.

There are five major ideas that provide the conceptual basis of the Plan. These concepts, which are discussed below, are:

- Growth accommodation as the means of preserving the quality of life, especially in rural areas.
- The geographic distribution and timing of growth and its relationship to public services.

- Recognition of the Plan as a decision-making tool requiring periodic review and revision.
- Growth accommodation among a variety of living environments.
- Interjurisdictional approach to planning issues.

Growth Accommodation and Quality of Life

Unquestionably, the most distinguishing characteristic of Shasta County is the quality of life enjoyed by its residents. Many terms are used to describe the nature of this quality of life, including rural living, small town atmosphere, or country lifestyle. The quality of life has and will continue to attract new residents to Shasta County. The irony of this situation is that the very attractiveness of this quality of life, if present trends are allowed to continue, could eventually lead to its destruction.

Over time, if present trends continue and more persons move to Shasta County seeking the quality of life it offers, problems will emerge in the areas of providing adequate water supplies and wastewater treatment facilities to rural homesites, the preservation of land resources sufficient to support the agriculture and timber industries as well as fish and wildlife habitat needs, the ability of government to fund services adequate to ensure the public safety and welfare, the air and noise pollution and energy costs of an auto-dependent land use pattern, and the preservation of the scenic beauty of the County.

There are alternatives to the strategy of allowing present trends to continue. One strategy would be to strictly regulate land divisions and the amount of new residential construction. This approach has been used by some local governments to effectively control the growth of their communities. However, aside from constitutional issues, this approach can be a factor which contributes to inflated land values within the community, thereby excluding low and moderate income families and individuals. This approach is not followed by the General Plan.

An alternative strategy is one of growth accommodation. This strategy recognizes the growth a community will experience during a specified time period, typically twenty years, and plans that the land supply necessary to accommodate this growth will be available. At regular intervals during this time period, for example every five years, additional lands are added to the supply where needed to ensure that at least a 15 year land supply is always available. The General Plan adopts this strategy of growth accommodation.

Growth accommodation in Shasta County is based on three factors. First, there exists within the County a land supply adequate to meet the amount of population and economic growth projected for the period 1990-2010, but this land supply is not uniformly distributed throughout the County. Second, County government, through the Plan and implementing regulations, may anticipate growth occurring in areas of the County where this land supply is made available.

Third, both the growth projections and the land supply inventory will require periodic review and revision over time to keep pace with changing conditions. Premises two and three form the basis of other major Plan concepts which are described below. Taken together, these concepts propose an assumption that by matching projected growth with the land supply inventory, growth may be accommodated while preserving the quality of life in Shasta County.

Geographic Distribution and Timing of Growth

Growth may be accommodated and the quality of life may be preserved in Shasta County if County government, through the General Plan and its implementing regulations, directs growth to areas of the County where and when the land supply is available to accommodate growth.

The geographic growth pattern contained in the General Plan is based on the following factors:

- The historic pattern of growth which has resulted in nearly 90% of the population of the County residing in 2 of the 10 planning areas (South Central Region - 84%; North East Shasta-5.5% based on 1990 Census data.
- The location of existing and potential unused capacity in community water supply and wastewater treatment systems.
- A hierarchy of community organization encompassing urban, town, and rural community centers.
- The location of agricultural timber and wildlife habitat resources in the County.

Based on these factors, the General Plan recognizes the primary roles in accommodating new population growth will be assumed by the SCR and North East Shasta Planning Areas and their constituent Urban, Town, and Rural Community Centers. Specifically, the Plan programs more than a 20-year land supply in the SCR and North East Shasta areas sufficient to accommodate that portion of the projected 20 year population growth which will respectively give these areas 87% and 7% of the County's population.

This planning goal provides for a 3% increase over the SCR's current portion of the County's population and reflects the fact that future major employment opportunities will locate in urban areas of Anderson and Redding and that the Rural Community Centers in the SCR are all served by community water systems. This increase is also designed to relax the development pressures on areas of the County which contain agricultural and timber operations.

The goal of 87% of the 20 year land supply to the SCR does not mean that new residents of the County will be forced to live in an urban area. Although some will prefer this type of environment, others will not. Therefore, the Plan provides that the Rural Community Centers in SCR will provide a significant share of the developable land supply to accommodate persons desiring to live in a rural environment.

The developable land supply programmed for the North East planning area represents neither an increase nor a decrease in the percentages of the County's population it currently contains. This reflects the future wastewater treatment capacities of the area's two Town Centers, Burney/ Johnson Park and Fall River Mills/ McArthur, and the constraints placed on land supply by agricultural and timber operations. In the other eight planning areas, the geographic distribution of growth orients the somewhat smaller residential lots around Rural Community Centers and limits development outside of these centers to relatively larger lots. The intent here is to provide rural living opportunities which minimizes their inherent conflicts with the agricultural and timber operations present in these areas and recognize the constraints on water supply and wastewater treatment, as well as the need to consider planning for wildland fire protection.

In addition to geographic distribution, the General Plan addresses the timing of growth in two ways. First, it is concerned with the monitoring of growth over time to ensure that the land supply inventory keeps pace with the rate of growth. Second, the other equally important aspect of timing is concerned with the relationship of growth to public services. This means that growth must be consistent with the level of services provided to an area, and the level of services must be consistent with the long-range, as well as its short-range, development potential as provided in the General Plan. The overall thrust of development timing is to achieve a growth pattern which is provided with services in the most cost effective manner.

It is important to note that the concept of growth accommodation through distribution and timing to preserve the quality of life is a major concept which permeates the entire Plan. But this concept can only be understood on a Countywide basis. Viewed from the perspective of a particular subarea of the County, growth accommodation may appear to be growth limiting. This local perception may be the result of one or more local conditions, e.g., uncertain groundwater supply, location of resource lands, or inaccessibility, which make the area unsuited for major growth. This local perception should not obscure the fact that overall the Plan does not limit, but rather accommodates growth.

A strategy of growth accommodation will also mean that in some areas of the County the permitted uses of land may not be in accord with the expectations of property owners. Conversely, in other areas, these expectations may be exceeded. This unevenness is an unfortunate but inevitable consequence of balancing private interests with the public health, safety, and welfare.

The Plan is a Decision-making Tool Requiring Periodic Review

The General Plan is designed to function as an integral part of the day-to-day land use decision-making process by providing a clear-cut policy foundation for all land use regulations and implementation mechanisms, including zoning and subdivision regulations, EIR procedures, and capital improvements programming. The General Plan will encompass a well-defined time period, which will extend to the year 2010. One of the key elements of the Plan, is the provision of a land supply inventory to accommodate the population and economic expansion projected for this period. However, this approximate 20 year horizon does not

remain fixed. The Plan will be continuously monitored by the County. This monitoring process will document how well the population and economic growth projections are holding up, where and at what rate the land supply inventory is being consumed, and related matters. The results of this monitoring process will be reported to the Planning Commission and Board of Supervisors annually. Every five years, the Plan will be comprehensively evaluated and major amendments will be proposed as are appropriate. Some of these amendments will address changes to the land supply inventory in order to maintain a 20 year land supply. Other amendments may address significant changes in the Plan objectives.

Growth Accommodations Among a Variety of Living Environments

The General Plan provides for three levels or types of communities within Shasta County. They are:

- Urban Centers
- Town Centers
- Rural Community Centers

These communities are shown in Figures PRE-5 and PRE-5A.

In addition, the Plan recognizes the rural homesite, which is located outside of a community.

Each type of community center and the category of rural homesite reflects a different level of public service availability and response to the surrounding natural environment, and in so doing provides a unique and different living environment. The Plan provides for each type of living environment. The characteristics of these living environments are discussed below.

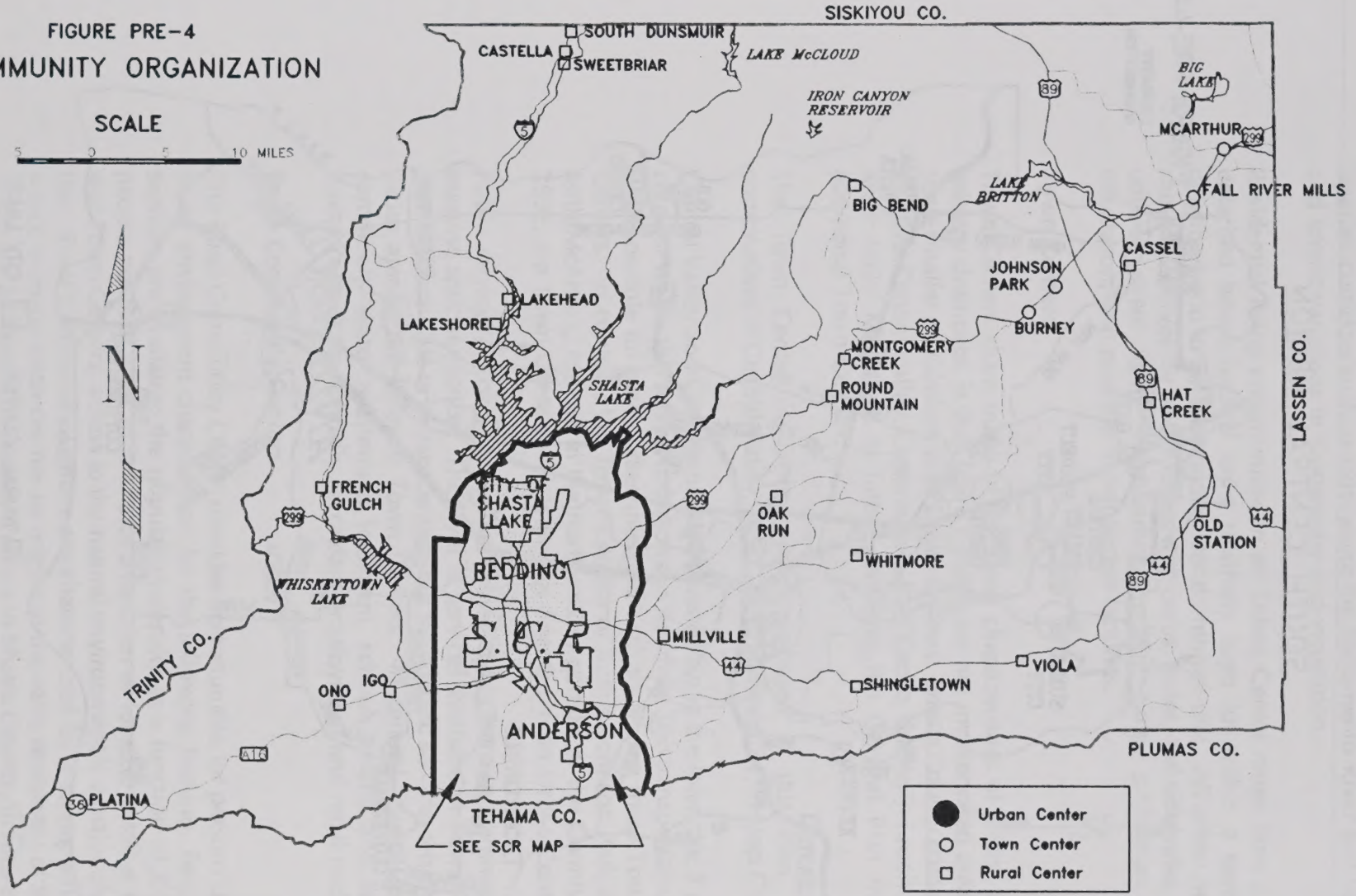
Urban Centers

This type of community provides the full range of urban services within the boundary of an incorporated city. There are two Urban Centers in Shasta County: Anderson and Redding.

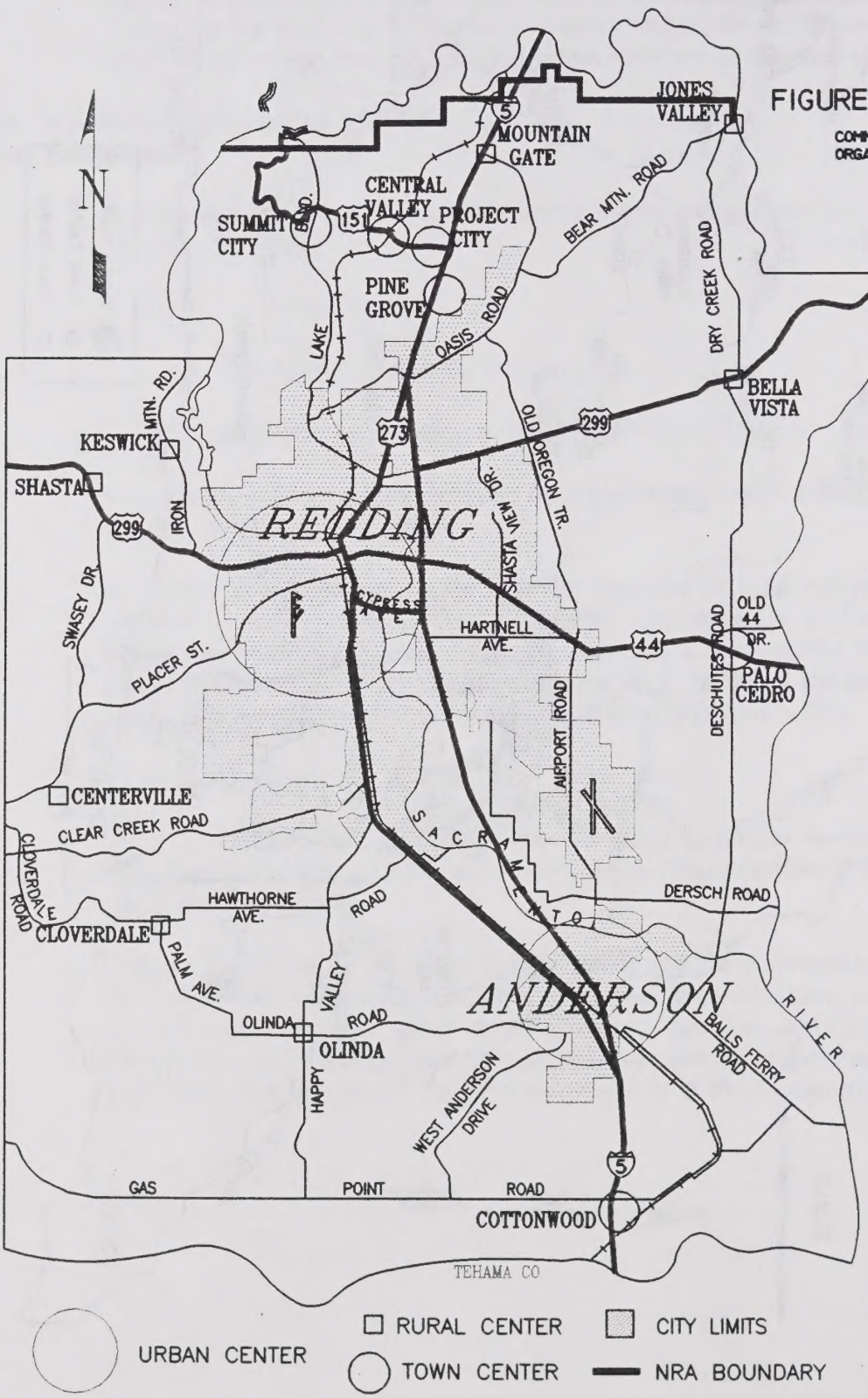
The services available within an Urban Center include community water supply and wastewater treatment, full-time police and fire protection, schools, public recreation facilities, emergency services, medical facilities, and cultural activities. The Urban Center functions as a major employment and retail trade center, and it contains one or more major destination points in the transportation network.

FIGURE PRE-4

COMMUNITY ORGANIZATION



General Plan Revision Program: SHASTA COUNTY, CALIFORNIA


SOUTH CENTRAL REGION
FIGURE PRE-4A
COMMUNITY ORGANIZATION
N
JONES VALLEY
MOUNTAIN GATE
CENTRAL VALLEY
PROJECT CITY
SUMMIT CITY
PINE GROVE
BEAR MTN. ROAD
DRY CREEK ROAD
OASIS ROAD
LAKE
BELLA VISTA
KESWICK
SHASTA
IRON MTN. RD.
REDDING
OLD OREGON TR.
SHASTA VIEW DR.
SWASEY DR.
PLACER ST.
HARTNELL AVE.
OLD 44 DR.
PALO CEDRO
DESCHUTES ROAD
AIRPORT ROAD
CENTERVILLE
CLEAR CREEK ROAD
CLOVERDALE ROAD
CLOVERDALE
HAWTHORNE AVE.
PALM AVE.
VALLEY ROAD
SACRAMENTO
DERSCH ROAD
ANDERSON
OLINDA
OLINDA ROAD
HAPPY
WEST ANDERSON DRIVE
BALLS FERRY ROAD
RIVER
GAS POINT ROAD
COTTONWOOD
TEHAMA CO
URBAN CENTER
RURAL CENTER
CITY LIMITS
TOWN CENTER
NRA BOUNDARY

Within an Urban Center, the man-made environment is the dominant theme. However, certain elements of the natural environment are either visually or physically accessible and may be used to add variety and texture to the urban environment. These natural features include views of the surrounding mountains, riparian corridors such as exist along the Sacramento River and various creeks, and scenic variations in topography and vegetation.

Residential living opportunities in an Urban Center range from a single-family detached house located on a relatively large lot within a typical suburban neighborhood to an apartment or condominium unit. All urban neighborhoods should be served by paved streets with curbs, gutter, and sidewalks, underground utilities, street lights, neighborhood public parks, pedestrian and bicycle circulation, and possibly transit access facilities.

Town Centers

Town Centers share many of the same characteristics of Urban Centers. The primary distinction is that Town Centers are not incorporated areas and usually serve smaller populations than Urban Centers. Shasta County contains five Town Centers: Central Valley, Cottonwood, Palo Cedro, Burney/Johnson Park, and Fall River Mills/ McArthur. In future revisions, the General Plan may recognize additional Town Centers.

The Town Center of Central Valley, as used in this Plan, includes the communities of Central Valley, Pine Grove, Summit City, Project City and Toyon.

Central Valley and Cottonwood are situated along the Interstate 5 transportation corridor which also serves Anderson and Redding. This transportation relationship is responsible for many other interrelationships among these Town and Urban Centers. In contrast, the Town Centers of Burney/Johnson Park and Fall River Mills/McArthur, located in the northeastern portion of the County along Route 299E, are Town Centers which are not oriented to an Urban Center.

Public services in Town Centers are provided by County government and limited purpose special districts. The level of services available in Town Centers is less than that available in Urban Centers, but the specific services which are provided varies among the different Town Centers. In general, Town Centers provide community water, wastewater treatment, schools, sheriff and fire protection. Town Centers are normally secondary employment and retail trade centers.

Rural Community Centers

The Rural Community Center provides opportunities for persons desiring to live in an environment characterized by the following features. Few if any urban services are available; the population density as a function of total number of people per total acres of land (not a function of lot size) is lower than in Urban and Town Centers; access to the natural environment is a major element of daily life. Rural Community Centers are characterized by a strong sense of identity, which in many instances has its origins in the early settlement of Shasta County. There are 25 Rural Community Centers in Shasta County. In future revisions, the General Plan may recognize additional centers.

Shasta County is divided into ten planning areas and, with the exception of the Northwestern Forest area, each contains at least one Rural Community Center, as follows:

Sacramento Canyon

- Lakeshore
- Lakehead
- Castella/Sweetbriar
- South Dunsmuir

Northwest Forest

None

Big Bend

- Round Mountain
- Montgomery Creek
- Big Bend
- North East Shasta
- Cassel
- Hat Creek

Lassen

- Old Station (North and South)

Eastern Forest

- Viola
- Shingletown

Eastern Upland

- Millville
- Oak Run
- Whitmore

South Central Region

- Mountain Gate
- Jones Valley
- Bella Vista
- Happy Valley
- Centerville
- Shasta/Keswick

Western Upland

- Igo
- Ono
- Platina

French Gulch

- French Gulch

In Rural Community Centers, water is typically provided by small public water systems and/or on-site wells or surface diversions and wastewater treatment by individual septic tanks. Important exceptions to this general rule are Rural Community Centers located in the South Central Region, all or part of which are served by community water systems. The availability of this service permits development at higher densities than will be possible in other Rural Community Centers because it eliminates dependence on uncertain groundwater supplies and the potential for contamination of groundwater by septic systems. This distinction between Rural Community Centers according to the availability of community water service plays a major role in the concept of Countywide distribution of growth.

Other services available within Rural Community Centers include schools, sheriff, and volunteer fire protection. Rural Centers typically provide commercial services to residents of the surrounding community and some centers also provide services to tourists. Commercial uses in Rural Community Centers are frequently mixed with residential and light industrial uses, in contrast to the tendency for physical segregation of different land uses in Town and Urban Centers. Given the size of the communities they serve, Rural Community Centers offer limited employment opportunities.

The natural, as opposed to the man-made environment, is the dominant theme in Rural Community Centers. Physical access to the natural environment for living and recreational purposes is an important element of daily life in Rural Community Centers. The natural environment surrounding these centers also provides the resource base for agriculture, timber, and tourism, industries which are extremely important to the economy of Shasta County. This desire for personal access to resources which also provide the basis for industry results in land use conflicts. The greater the number of people located in a rural area, the greater the potential for conflicts. A major objective of the Rural Community Center is to minimize this potential for conflicts by providing opportunities for relatively small lot rural residential development within a designated area in proximity to the Rural Community Center, while locating large lot, lower densities in areas outside the rural communities where the potential for conflict between residential and resource based land uses is greatest.

Residential development within Rural Community Centers is either conventional or manufactured single-family detached housing. Multifamily housing may also be permitted in Rural Community Centers, if compatible with surrounding land uses. As provided by policies contained in the Community Development Element, lot sizes in Rural Community Centers range from one acre in centralized mixed use designations and 2 acres and larger elsewhere. The lot sizes are a function of dependence on either on-site water supply, or on-site wastewater treatment, or both, and the desire for lower population densities. In some Rural Community Centers, existing developed lots are much smaller in size. The concept of a Rural Community Center recognizes the existence of smaller developed lots, while also recognizing that future development will require new lots to be larger to comply with County wastewater treatment standards and community lifestyle objectives.

Physical design standards are much less demanding than those applicable to Urban and Town Centers. However, these standards also respond to factors not present in Urban and Town Centers, including dependence on-site water supply and wastewater treatment, and wildland fire protection.

Rural Homesite

In areas providing rural homesites public services are usually limited to schools, sheriff and volunteer fire protection and the commercial services provided by Rural Community Centers which are not always readily available. The influence of the surrounding natural environment is pervasive, and frequently the presence of the man-made environment is limited to the residence, the electric power lines which serve it, and the road which provides access. Reliance on motor vehicles for basic transportation is very high in these rural areas. In many cases, the rural homesite is bordered by agricultural or timber operations, or important wildlife habitat, raising the potential for conflict with them. Also, rural homesites are typically located in areas where groundwater supplies are limited, soils constrain the use of septic tanks, and fire hazards are extreme. Some rural homesites are located in areas which can pose serious soil erosion problems with associated impacts extending far from the site.

The concept of the rural homesite in the General Plan responds to these above factors by restricting the density of rural residential development outside of Rural Community Centers to relatively large lots. Density is expressed in terms of dwelling units per unit of land area, that is, one dwelling unit per 5 acres and larger. It is important that this density regulation not be confused with lot size. A major element of the rural homesite concept is to allow the density averaging of dwelling units so that smaller lots can be provided while maintaining the desired overall density. Illustrations of variable lot sizes achieved by density averaging is shown in Figure PRE-5.

Housing types found in the rural homesite would be either conventional or manufactured single-family detached housing. Physical design standards would permit experimentation with alternative technologies in wastewater treatment and at a minimum must be consistent with public health and safety objectives.

3.3 Interjurisdictional Approach to Planning Issues

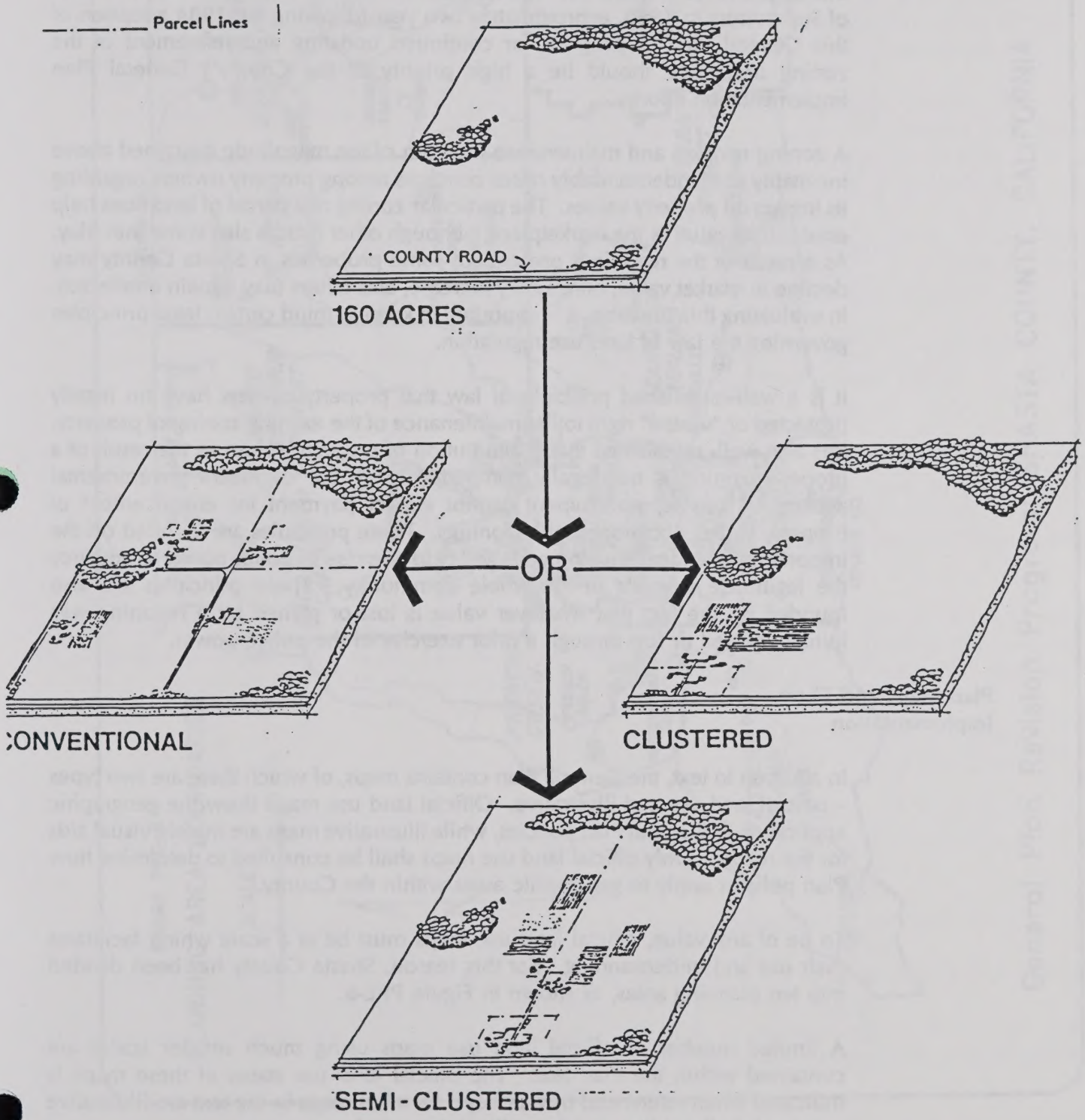
Planning issues do not respect the invisible or artificial boundary lines of cities, counties, and special districts. The various factors of the natural and man-made environments of the County are closely interrelated. These factors, such as water supply, wastewater treatment, circulation, air quality, and community development, cause the planning issues they raise to transcend political subdivisions. Unilateral approaches to these issues may appear attractive in the short run, but over the long term they may prove undesirable. Several reasons may account for this.

Implicit in any local government land use decision are certain benefits and costs. These benefits and costs may be measured in monetary terms such as tax revenues gained or public service expenditures. In making an independent land use decision, a rational governmental entity, be it County, city, or special district, will seek to maximize its benefits and minimize its costs. Frequently, minimization of costs simply means shifting them to some other entity of government. A better approach would be one designed to foster cooperation so that all methods of cost reduction are explored and, where feasible, utilized.

Unilateral or independent approaches to planning issues may result in the unintended foreclosure of planning options which could be exercised by another government to the advantage of all. Cooperative planning can avoid this by allowing governments to inform each other of their intentions and jointly develop mutually agreeable plans. Independent approaches to the provision of services to new development can result in the costly duplication and under-utilization of services and the application of different standards for services to areas which may ultimately come under the jurisdiction of another government through annexation. In the latter situation, a change in jurisdiction may require the upgrading of services in existing, developed areas at much higher costs than if the ultimate level of services had been installed initially.

A major theme of the General Plan is the need for interjurisdictional coordination in resolving the planning issues facing the Cities of Anderson and Redding and Shasta County and its many special districts.

FIGURE PRE-5
Examples of Variable Lot Sizes Through Density Averaging (DENSITY: 1 DU/40 ACRES)



4.0 IMPLEMENTATION

4.1 Implementing the Plan

Implementation of the Shasta County General Plan requires a major commitment of public and private resources. The most significant part of the implementation program will be maintenance of the zoning ordinance. A comprehensive and thorough overhaul of the County's zoning ordinances was adopted by the Board of Supervisors in 1986, approximately two year following the 1984 adoption of this General Plan. A program for continued updating and refinement of the zoning ordinance should be a high priority of the County's General Plan implementation effort.

A zoning revision and maintenance program of the magnitude described above inevitably and understandably raises concerns among property owners regarding its impact on property values. The particular zoning of a parcel of land does help establish its value in the marketplace, although other factors also come into play. As a result of the rezonings prescribed, some properties in Shasta County may decline in market value, others may increase, and others may remain unaffected. In evaluating this situation, it is important to keep in mind certain legal principles governing the law of land use regulation.

It is a well-established principle of law that property owners have no legally protected or "vested" right to the maintenance of the existing zoning of property. It is also well- established that a diminution of property values as the result of a proper rezoning is not legally compensable by the cognizant governmental agency. Likewise, government cannot expect payment for enhancement of property values occasioned by rezonings. These principles are founded on the importance of a local government's ability to exercise its police power to advance the legitimate interests of the whole community. These principles are also founded on the fact that whatever value is lost or gained by a rezoning was initially gained or lost through a prior exercise of the police power.

Plan Maps and Their Implementation

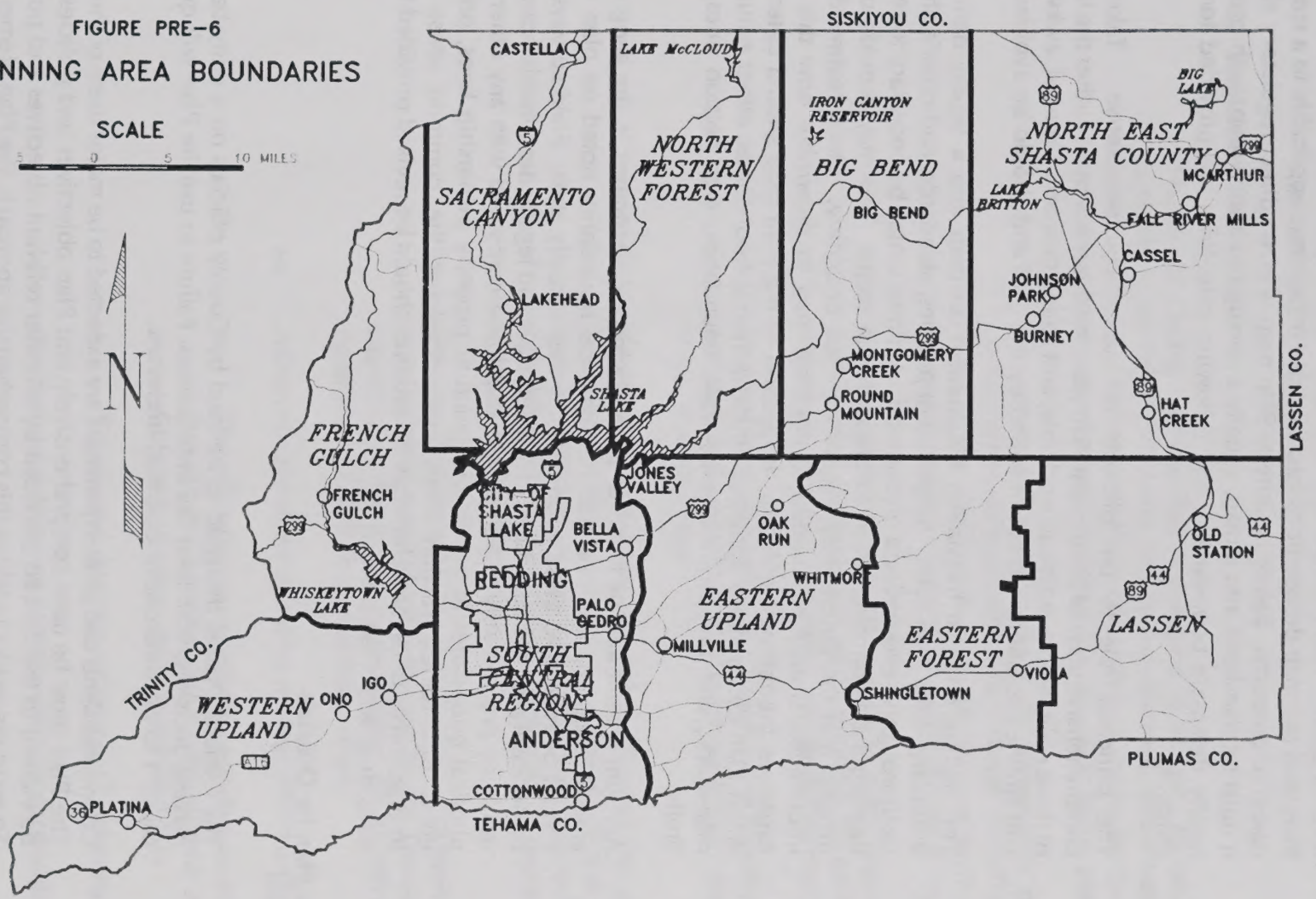
In addition to text, the General Plan contains maps, of which there are two types – official land use and illustrative. Official land use maps show the geographic application of General Plan policies, while illustrative maps are merely visual aids for the reader. Only official land use maps shall be consulted to determine how Plan policies apply to geographic areas within the County.

To be of any value, official land use maps must be at a scale which facilitates their use and understanding. For this reason, Shasta County has been divided into ten planning areas, as shown in Figure PRE-6.

A limited number of official land use maps using much smaller scales are contained within the Plan text. The official land use status of these maps is indicated when referenced by a policy. All other maps in the text are illustrative only and shall not be used for policy interpretation purposes.

FIGURE PRE-6

PLANNING AREA BOUNDARIES



General Plan Revision Program: SHASTA COUNTY, CALIFORNIA

The purpose of official land use General Plan maps is to show the geographic application of Plan policies. Use of official land use Plan maps in this capacity must respect the limitations of General Plan maps with regard to precision and level of detail. Past practice in Shasta County was to directly translate General Plan land use map designations into land use regulations applicable to a specific parcel of property. Before a General Plan map is given direct regulatory effect, it must be translated into a map, usually a zoning ordinance map, with precise, legally definable boundaries. The following guidelines are provided for this purpose.

The principal rule to be followed is one of common sense. Taking a comprehensive view of all relevant Plan policies, the result must further the intent of these policies in a practical, workable, and sound manner. Unusual, awkward, and strained solutions are not intended by the plan and should be avoided.

The starting point in translating a General Plan map into a legally definable boundary is the Plan itself. All pertinent policies, standards, and criteria should be thoroughly reviewed and understood. At times it may be necessary to review background information used to prepare Plan maps. This may provide useful insights into the policy rationale for the Plan boundary. Once reviewed, the information should be applied to the Plan map to determine how this map expresses the relevant policies. Inspection of the Plan map should determine when Plan designations appear to follow physical boundaries, either natural or man-made, and non-physical, man-made boundaries, e.g., section lines, city limits.

Account should also be taken of existing physical conditions in the geographic area in question. Physical and non-physical boundaries noted on plan maps should be related to these boundaries as they actually exist. Field surveys may be necessary for this purpose. Once a definable and legally describable boundary has been preliminarily established, it should be compared with any other non-physical boundaries in the vicinity, such as property ownership lines, political entity boundaries, section lines, etc. Applying the common sense rule, impractical or unusual preliminary boundaries should be revised provided this is consistent with Plan policies.

Use of the Plan by Officials and Citizens

The General Plan is designed to be used by County officials on a daily basis in making decisions with land use implications. Failure to use the Plan will quickly cause it to become out of date and irrelevant.

County residents and property owners are expected to be major users of the Plan. The Plan must be used comprehensively and Plan objectives and policies must be viewed in the context provided by all other relevant objectives and policies. To assist the reader in taking this comprehensive approach, the Plan elements are cross-referenced and each element group contains an introduction explaining the relationship of its elements to those of the other groups.

A major function of the Plan is to inform property owners of the policies applicable to their lands and the long-term implications of these policies. To this end, public access to and understanding of the Plan is encouraged and the Planning Department will be available to the public to answer questions concerning the Plan.

4.2 Implementation Objectives

The Shasta County General Plan is designed to be used by other government agencies to provide a framework for interjurisdictional coordination of land use planning efforts. The function of these objectives is to provide guidelines for the implementation of the General Plan and the operation of the planning process.

I-1 Recognition of planning as a comprehensive process that is derived from public policies clearly stated in the General Plan and includes the application of these policies to lands within the County through zoning, subdivision, and other regulations.

I-2 To develop a General Plan which is both internally consistent among all its elements and which provides the policy basis for the zoning, subdivision, and other implementing ordinances.

I-3 To develop public trust and confidence that the objectives, polices, and standards, shall be faithfully adhered to and equitably applied to all land use matters.

I-4 To provide public assurance that the General Plan shall be applied in a manner that responds to local conditions and local concerns through the interpretation of its policies, but only within well-defined and understood limits intended to preserve the overall integrity of the plan.

I-5 Development of a planning process that resists short-term pressures exerted by narrow interests to modify the General Plan, but is capable of thoughtfully responding to significantly changed conditions or shifts in community values.

I-6 Administration of the planning process which is characterized by:

- The efficient and expeditious handling of planning matters through the coordination of the various agencies of the County and other government agencies.
- Timely and decisive action on all planning matters.

I-7 To promote a planning process which is accessible to all citizens.

I-8 To fashion a planning process which recognizes the continuing need for citizen review of the objectives, policies, and standards contained in the General Plan.

I-9 To convert the General Plan land use boundaries to precise zoning boundaries through the use of natural and man-made physical boundaries such as creeks, ridges, roads, etc., and non-physical boundaries such as property lines, section lines, etc.

In an effort to better promote and realize these objectives, the County will prepare and maintain a matrix which identifies the General Plan's objectives and policies and how they are generally to be accomplished. The matrix should summarize such key information as the agency responsible for implementation, approximate time frames, general budget, financial and other important considerations. The implementation matrix is meant to be an administrative and informational tool which helps to guide implementation of the Plan's adopted objectives and policies. Once this tool is established, it should be reviewed and updated annually as part of the County's annual report on the General Plan pursuant Government Code Section 65400(b).

5.0 PUBLIC SAFETY GROUP

The Public Safety Group encompasses General Plan elements concerned with aspects of Shasta County's natural and man-made environment which pose threats to human life or property. The individual elements contained in the Public Safety Group are listed below:

- Seismic and Geologic Hazards
- Flood Protection
- Dam Inundation
- Fire Safety and Sheriff Protection
- Noise
- Hazardous Materials

These elements are grouped together because collectively they define basic constraints on land use that will affect community development patterns. They are presented first because an understanding of their limitations is essential to formulating a development pattern which adequately provides for human safety.

It is also important to understand the interrelationships of the three element groups. Elements contained in the Public Safety Group place limits on the use of the County's physical resources in order to reduce the risks of loss or damage to life and property to acceptable levels. Elements contained in the Resources Group describe the opportunities available due to the County's resource base, and then define the limits within which these resources may be used on a long-term, sustainable basis. Elements in the Community Development Group in turn respond to risks posed by natural and man-made hazards and to the opportunities presented by the resource base.

Responding to these risks and opportunities in a responsible manner will ensure that both present and future generations of County residents will be able to enjoy the quality of life which Shasta County now offers.

5.1 SEISMIC AND GEOLOGIC HAZARDS

5.1.1 Introduction

Section 65302(g) of the California Government Code requires that general plans include an element containing identification and appraisal of seismic and geologic hazards. Seismic hazards addressed by this element include surface faulting, ground shaking, and ground failure. Non-seismic hazards addressed include volcanoes, erosion, and expansive soils. This element is based on a technical report included in the background reports to the General Plan. Its major findings and recommendations are summarized below.

Findings

5.1.2 Seismic Hazards

Although not as active as some areas of the state, Shasta County is a seismically active region. The seismicity of a region is described as the distribution, recurrence, and intensity of earthquakes over a period of time. Earthquake activity has not been a serious hazard in Shasta County's history, nor is it probable that it will become a serious hazard in the future.

Surface Faulting

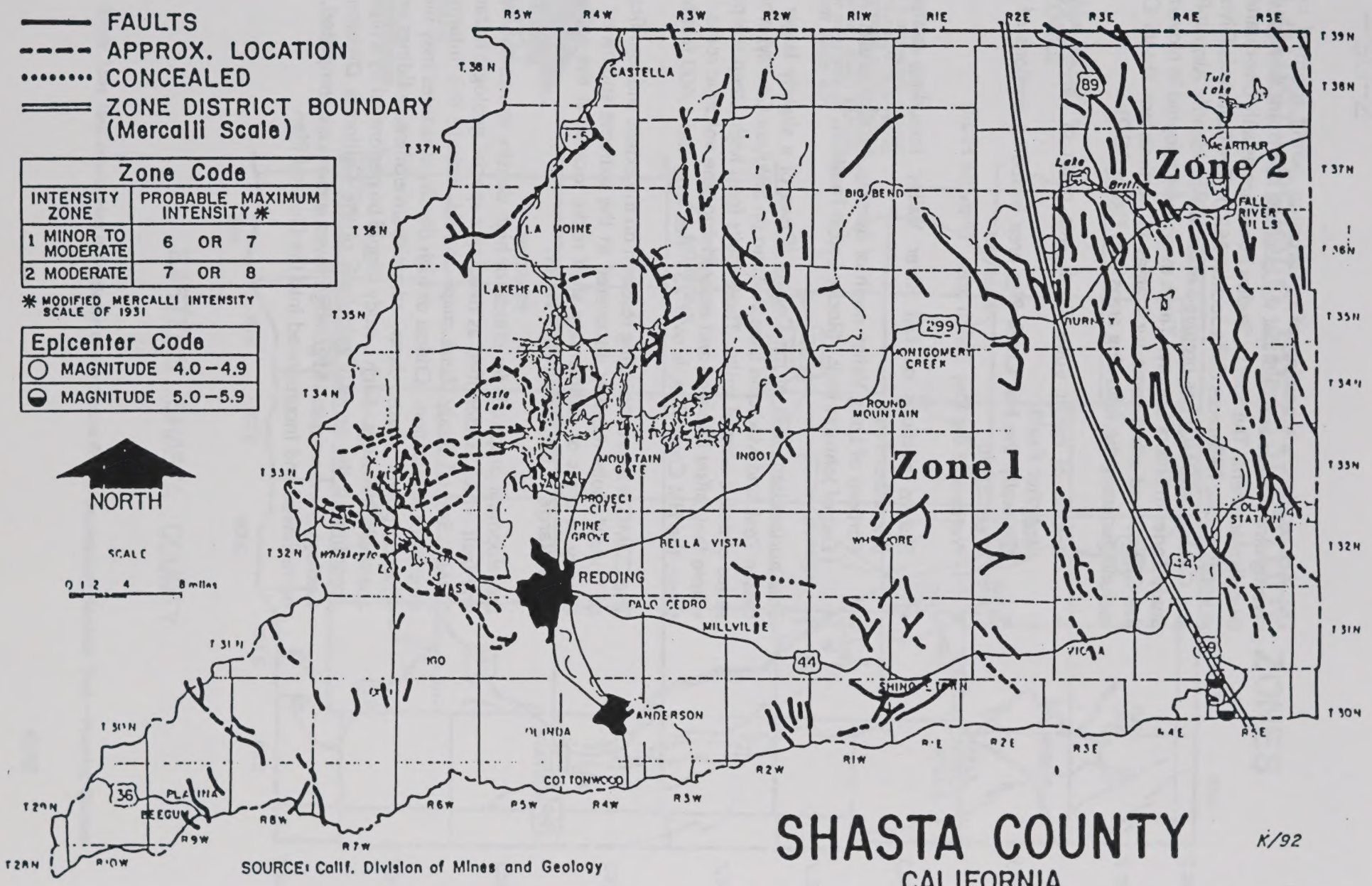
During an earthquake, ground rupture with horizontal and/or vertical displacement may occur. Usually, the width of surface faulting is narrow in rock and much wider in saturated soils. Ground rupture also tends to occur along lines of previous faulting. With detailed investigation, surface faulting usually can be recognized and avoided. However, not all fault traces have been mapped, and some active faults have no surface expression. Where a known active fault or potentially active fault is approximately located, a geological investigation should be conducted prior to development to determine the precise location of fault traces.

The Fault Map of California (1975, Jennings, C.W., et al.) places Quaternary faults in the eastern and southern portion of Shasta County. Quaternary faults are those with the latest movement within the last 2 to 3 million years. The State of California (California Division of Mines and Geology) considers Quaternary faults to be potentially active. In the western portion of the County are older, inactive faults from which future movement is considerably unlikely. Figure SG-1 shows the approximate location of both active and inactive faulting in Shasta County.

In 1972 the California Legislature enacted the Alquist-Priolo Special Studies Zones Act, which requires the State Geologist to delineate Special Studies Zones around all known traces of potentially and recently active faults in California.

FIGURE-SG-1

FAULTS AND SEISMIC ACTIVITY



SOURCE: Calif. Division of Mines and Geology

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The Act requires withholding of construction permit approval until geologic investigation has determined that the building site is not threatened by surface fault displacement. The Special Studies Zones are usually one-quarter mile or less in width (Public Resources Code Section 2622). The California Division of Mines and Geology (CDMG) has prepared maps which identify Alquist-Priolo Special Study Zones in Shasta County. These maps were adopted in November 1991 by the CDMG and affect some rural areas in northeastern Shasta County which include generally the following areas (see Figure SG-2):

- Portion of upper Butte Creek area north of Lassen Park. (southern McArthur Fault)
- Generally the Hat Creek Rim area including portions of Cassel. (Hat Creek Fault)
- Portions of the Day Bench area. (Pittville Fault)

- Eastern portions of Fall River Valley including eastern McArthur. (McArthur Fault)
- Portions of Long Valley north of Burney. (Rocky Ledge Fault)
- East of Johnson Park. (Rocky Ledge Fault)

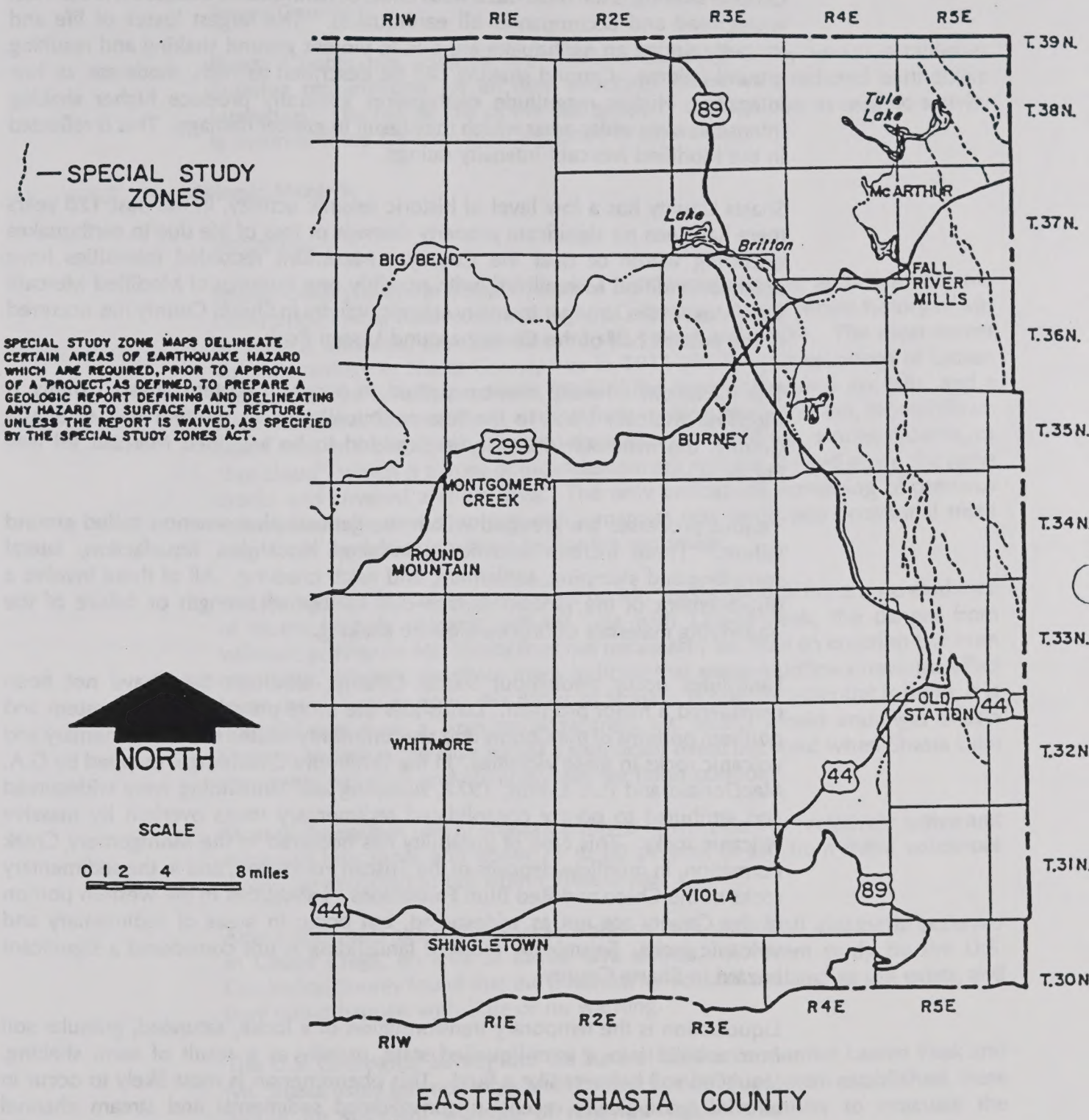
This northeastern area of the County is part of a slightly larger area between Lassen Peak and Medicine Lake volcano (in Siskiyou County) which is cut by a series of active normal faults. These faults form high, steep scarps called "rims" where they offset Pliocene and early Pleistocene volcanic rocks. The largest of these, the Hat Creek Rim, is over 25 miles long and 1,600 feet high. (1)

The CDMG is also conducting research on the extent and significance of a series of "thrust" faults recently discovered in the extreme southwest portion of the County in areas of sedimentary shelf rocks located at the eastern base of the Coast Range in the Sacramento Valley.

Development proposals for critical or high density structures within 1/2 mile of any fault which is identified as needing a special geologic hazard study by the CDMG Special Study Zone maps should include this information with the proposal's application. Critical or high density structures may include hospitals, schools, power plants, dams, administrative/office buildings, or high density apartment buildings. Such a study should be performed by a registered geologist according to the general guidelines of the California Division of Mines and Geology. As more detailed geologic investigations are completed, the data should be reviewed and incorporated into the General Plan.

FIGURE—SG-2

ALQUIST—PRIOLO SPECIAL STUDY ZONES



SPECIAL STUDY ZONE MAPS DELINEATE CERTAIN AREAS OF EARTHQUAKE HAZARD WHICH ARE REQUIRED, PRIOR TO APPROVAL OF A "PROJECT", AS DEFINED, TO PREPARE A GEOLOGIC REPORT DEFINING AND DELINEATING ANY HAZARD TO SURFACE FAULT REPTURE, UNLESS THE REPORT IS WAIVED, AS SPECIFIED BY THE SPECIAL STUDY ZONES ACT.

EASTERN SHASTA COUNTY

NOTE: Detailed Study Zone Map information is available at the Shasta County Development Services Dept.—Planning Division

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Ground Shaking and Failure

Ground shaking is the most hazardous effect of earthquakes because it is the most widespread and accompanies all earthquakes. The largest losses of life and property during an earthquake are due to violent ground shaking and resulting ground failures. Ground shaking can be described as high, moderate, or low intensity. Higher magnitude earthquakes generally produce higher shaking intensities over wider areas which may result in greater damage. This is reflected in the Modified Mercalli intensity ratings.

Shasta County has a low level of historic seismic activity. In the past 120 years there has been no significant property damage or loss of life due to earthquakes occurring within or near the County. Maximum recorded intensities have reached Modified Mercalli VII, with possibly one instance of Modified Mercalli VIII. Most of the stronger intensity seismic activity in Shasta County has occurred in the eastern half of the County around Lassen Peak.

The maximum intensity event expected to occur in eastern Shasta County is Modified Mercalli VIII. In the less seismically active western half of Shasta County, the maximum intensity is expected to be Modified Mercalli VII (see Figure SG-1).

Various processes are grouped within the general phenomenon called ground failure. These include seismically induced landslides, liquefaction, lateral spreading and slumping, settlement, and lurch cracking. All of these involve a displacement of the ground surface due to loss of strength or failure of the underlying materials during earthquake shaking.

Landslides occur throughout Shasta County, although they have not been considered a major problem. Landslides are more prevalent in the eastern and northern portions of the County and are commonly related to the sedimentary and volcanic rocks in these vicinities. In the Whitmore Quadrangle mapped by G.A. MacDonald and P.A. Lydon, 1972, slumping and landsliding were widespread and attributed to poorly consolidated sedimentary rocks overlain by massive volcanic rocks. This type of instability has occurred in the Montgomery Creek Formation, in mudflow deposits of the Tuscan Formation, and in the sedimentary rocks of the Chico and Red Bluff Formations. Landslides in the western portion of the County are not as widespread, but occur in areas of sedimentary and volcanic rocks. Seismically induced landsliding is not considered a significant hazard in Shasta County.

Liquefaction is the temporary transformation of a loose, saturated, granular soil from a solid into a semi-liquefied state, usually as a result of earth shaking. Liquefied soil behaves like a fluid. This phenomenon is most likely to occur in alluvial (geologically recent, unconsolidated sediments) and stream channel deposits, especially when the ground water table is high. Areas of potential liquefaction are located in the north central valley area referred to in this report as the South Central Region (SCR).

Damage in Shasta County resulting from earthquakes would most likely be from ground shaking and related ground failure. The effects of ground shaking and ground failure are best mitigated by adequate geotechnical investigations of specific sites, and by adequate design for the maximum credible earthquake for Shasta County.

Shasta County has adopted the Uniform Building Code, which establishes building requirements for all new structures based on predicted earthquake intensities. The risk of loss of life and property damage due to seismic activity is minimal if the Uniform Building Code is enforced.

5.1.3 Non-Seismic Hazards

Volcanoes

Shasta County is at the southern end of the Cascade Range, an active volcanic chain that extends northward into British Columbia. As the recent history of Mt. St. Helens indicates, the Cascades are still young and active. The most recent volcanic activity in Shasta County was in 1914-1917, when eruptions of Lassen Peak produced lava flows on the flank of the crater, numerous ask falls, and a large mudflow. The mudflow, a result from melting snow and ash, moved down Lost Creek and Hat Creek. Several days after the mudflow, a nuee ardente, or "hot cloud", which is a mass of incandescent ash and gas, flowed down the same creeks and covered a wider area. The only indications remaining of previous volcanic activity are hot springs and fumaroles (gas vents) and occasional small magnitude earthquake swarms below the mountain.

Hot springs and fumaroles are present on Mt. Shasta, though there is no evidence of recent historic volcanic activity. As with Lassen Peak, the danger from volcanic activity on Mt. Shasta may not necessarily be from an eruption but from mudflows. Historic mudflow maps indicate that some mudflows have travelled more than 18 miles down the flanks of Shasta. While the potential is there, it is doubtful that even a large mudflow from Mt. Shasta would endanger Shasta County, except in the case where a significant event occurred when Shasta Lake was completely full and spilling water for flood control.

Most of the eastern half of Shasta County is downwind from relatively active and explosive volcanoes and about 75 to 80 percent of ash from these volcanoes would be expected to fall within these areas.

About 300 years ago within Lassen National Park, a rockfall avalanche occurred in Chaos Crags, an area of dacite lava domes. A recent study by the U.S. Geological Survey found that the potential for rockfall avalanches still exists, and they could happen with little or no warning.

The U.S. Geological Survey and the State of California monitor Lassen Peak and Mt. Shasta using seismometers and tiltmeters. With this system established, there would be sufficient warning of renewed volcanic activity to evacuate the immediate vicinity of the mountain.

Erosion

Erosion generally involves the removal of earth materials from one area with deposition in another and is a normal and inevitable geologic process. Erosion can be concentrated, as when land surfaces are gullied and stream banks are undercut, or it can be spread widely by sheetwash and slope denudation. Excessive erosion will cause sedimentation and can damage or destroy waterway and riparian habitat, clog drainage structures, lakes and reservoirs, and floodplains. Activities by man, such as grading, frequently accelerate erosion and sedimentation.

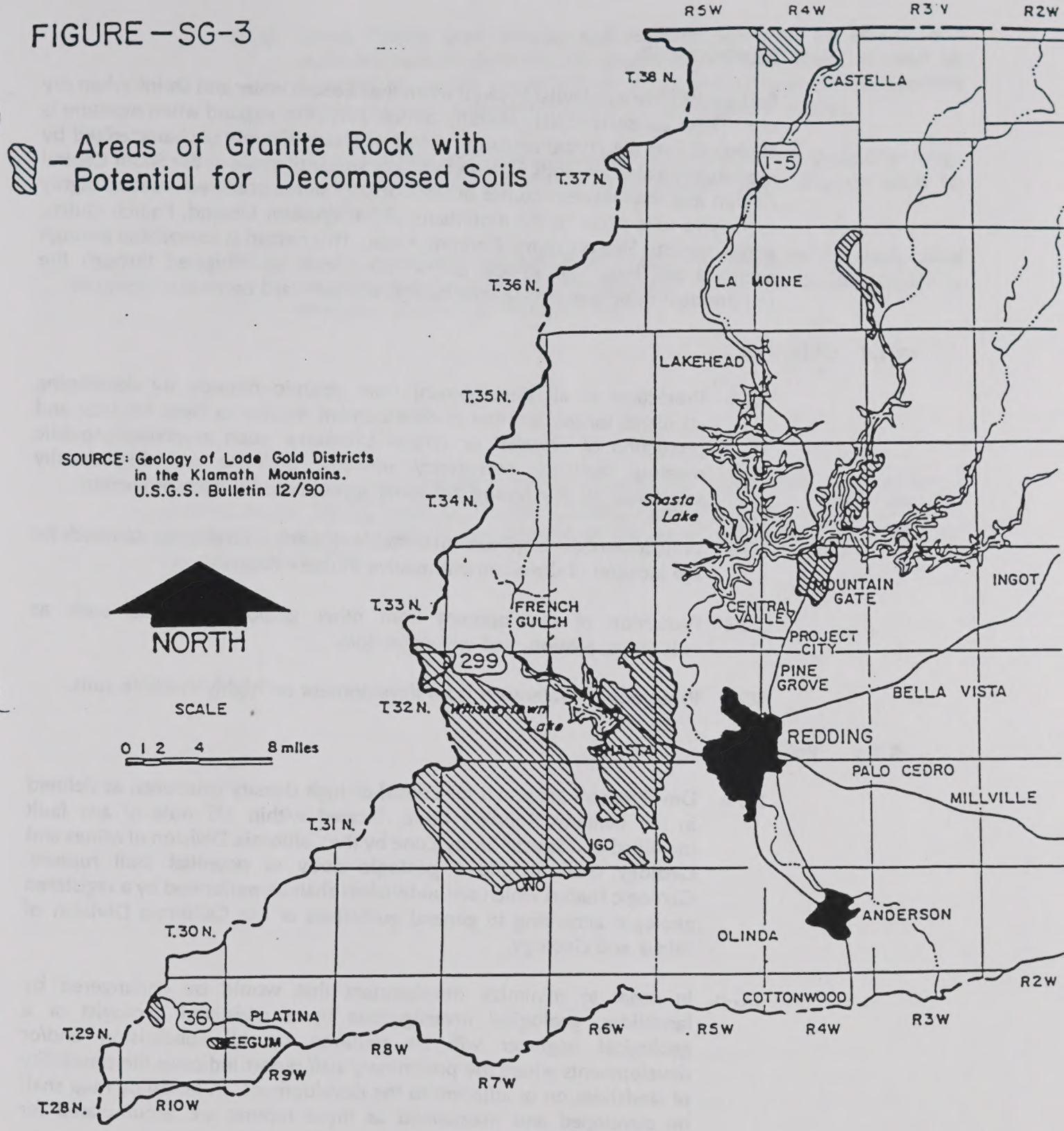
Extra special erosion concerns are found whenever development activities are proposed in soils containing parent materials of decomposed granite. Once disturbed, decomposed granite soils are very difficult to restabilize and offer very poor nutritional support for reestablishment of vegetative cover. A significant band of decomposed granite soils is located west of the Redding area from west of Shasta Dam south to Clear Creek, as shown in Figure SG-3. Special development and erosion control practices are needed whenever soil disturbing activities are proposed in these areas.

Readers interested in more detailed erosion control techniques and methods should review the Shasta County Erosion Control Study (CH2M Hill, 1980) and Erosion and Sediment Control Handbook (Goldman, 1986).

The Shasta County Erosion Control Study presents a set of guidelines for the preparation of an erosion and sedimentation control plan for a particular project. Also included are detailed appendices describing the use of these guidelines and specific control methods. These erosion and sediment control reference materials should be utilized by the County while developing a set of guidelines to assist the public in implementing the County grading ordinance.

Since adoption of the General Plan in 1984, considerable rural residential development has occurred in some of the County's steeper and highly erodible hillsides, particularly west of Redding. As a result, several area creeks, and most notably Middle Creek, have been subject to serious degradation as a result of large volumes of sediment eroding from disturbed hillsides in the watershed. In response, the County should implement special development standards for hillside areas where highly erodible soils may have significant sediment impact offsite. These standards should be comprehensive and address other resource and public safety concerns that are often faced in the County's hillside areas.

FIGURE – SG-3



WESTERN SHASTA COUNTY

NOTE: For Specific Information Consult Appropriate Soils and/or Geological Maps

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Expansive Soils

Some soils have a potential to swell when they absorb water and shrink when dry out. These expansive soils generally contain clays that expand when moisture is absorbed into the crystal structure. Most of Shasta County is characterized by moderately expansive soils with areas of low expansiveness in the South Central Region and southeastern corner of the County. Small scattered areas of highly expansive soils occur in the mountains of the Western Upland, French Gulch, and North East Shasta County Planning Areas. This hazard is identifiable through standard soil tests. Its effects on structures can be mitigated through the requirement of proper engineering design and standard corrective measures.

5.1.4 Objectives

SG-1 Protection of all development from seismic hazards by developing standards for the location of development relative to these hazards; and protection of essential or critical structures, such as schools, public meeting facilities, emergency services, high-rise and high-density structures, by developing standards appropriate for such protection.

SG-2 Protection of development on unstable slopes by developing standards for the location of development relative to these hazards.

SG-3 Protection of development from other geologic hazards, such as volcanoes, erosion, and expansive soils.

SG-4 Protection of waterways from development on highly erodible soils.

5.1.5 Policies

SG-a Development proposals for critical or high density structures, as defined in the Uniform Building Code, located within 1/2 mile of any fault identified as a Special Study Zone by the California Division of Mines and Geology shall include a geologic study of potential fault rupture. Geologic studies which are undertaken shall be performed by a registered geologist according to general guidelines of the California Division of Mines and Geology.

SG-b In order to minimize development that would be endangered by landslides, geological investigations by a registered geologist or a geological engineer will be required on all subdivision and/or developments where the preliminary staff report indicates the possibility of landslides on or adjacent to the development. A landslide map shall be developed and maintained as these reports are accumulated for reference by the development sponsors.

SG-c Shasta County shall coordinate with state and federal agencies monitoring volcanic activity and shall periodically review and update the **Shasta County Emergency Plan** with respect to volcanic hazards.

SG-d Shasta County shall develop and maintain standards for erosion and sediment control plans for development. Special attention shall be provided to erosion prone hillside areas, including extremely erodible soils types such as those evolved from decomposed granite.

SG-e When soil tests reveal the presence of expansive soils, engineering design measures designed to eliminate or mitigate their impacts shall be employed.

SG-f Shasta County shall pursue preparation of development standards based on topography and soil erosion potential in revising its land capability standards pursuant to Policy CO-h.

Footnotes:

1. Further information on active faults in Northeastern Shasta County is found in the article entitled Active Faults North of Lassen Volcanic National Park, Norther California, California Geology, California Department of Conservation-Division of Mines and Geology, March, 1991.

5.2 FLOOD PROTECTION

5.2.1 Introduction

The purpose of the Flood Protection Element is to reduce damage to public health and property resulting from flooding. Flood protection is required as part of a general plan by Government Code Section 63202(a).

5.2.2 Findings

Various areas in Shasta County are subject to flooding by rivers and creeks. Many of these same areas are also desirable locations for development as they are often characterized by level topography, good access to transportation systems, and soils well suited for agricultural operations and septic tank usage.

Development in flood-prone areas of the County has resulted in damage to property and loss of life when flooding occurred. Between 1900 and 1991, there have been no less than sixteen severe floods in the Sacramento River Basin.

The private and public costs of flooding are substantial. In 1970, flooding resulted in approximately $12 million in damages, and close to $8 million in 1974. Problems caused by flooding include loss of life, displacement or complete destruction of buildings, water damage to buildings and furnishings, siltation, temporary loss of utilities, road damage, transportation slowdowns, loss of goods and materials, damage to bridges by objects floating down stream, and the threat of waterborne disease.

Despite the potential hazards involved with development in floodplains, they remain desirable areas for a variety of land uses. In addition to residential and agricultural uses, flood-prone areas frequently offer good recreational opportunities and often provide habitat for many forms of wildlife, including rare or endangered animal and plant species. The Sacramento Rive floodplain is an excellent example of such an area in Shasta County.

Damages resulting from the development of flood-prone areas can be minimized through floodplain management. This management concept encompasses a comprehensive program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control projects, and floodplain management regulations.

The National Flood Insurance Act of 1968 offers an important incentive to communities for implementing a floodplain management program. In communities which have adopted floodplain management regulations, owners of property located in flood-prone areas may obtain federally subsidized flood insurance. Shasta County has adopted such floodplain management regulations.

The boundary of the 100-year floodplain is the basic planning criterion used to distinguish areas where flood hazards justify the establishment of floodplain management regulations. Outside this boundary, the degree of flooding risk is not considered sufficient to justify the imposition of flood plain management regulations, while inside the 100-year floodplain some level of regulation is required to protect public health, safety, and welfare.

For purposes of the National Flood Insurance Program, the area of the 100-year floodplain is divided into a floodway and a floodway fringe. The relationship between the floodway and the floodway fringe and their significance to floodplain development are shown in Figure FL-1. The precise boundaries of those two areas are delineated on maps and described in reports produced by the Federal Emergency Management Agency (FEMA) for various creeks in the County which have experienced or are expected to experience significant development.

The area between the floodway and the boundary of the 100-year floodplain is termed the floodway fringe and encompasses the portion of the floodplain that could be used for development without increasing the surface elevation of the 100-year flood more than 1.0 foot at any point.

The floodway is the channel of a stream, plus any adjacent floodplain areas, that must be kept free of development so that the 100-year flood can be carried away without increasing the flood height more than one foot.

Once the floodway and the floodway fringe have been distinguished within the 100-year floodplain, different development standards must be formulated for each area. These standards have two functions. First, they are designed to minimize loss of life and property damage by (a) controlling the types of land uses which are permitted, and (b) prescribing certain construction methods. Second, they are intended to preserve the ability of the floodway to discharge the 100-year flood.

National Flood Insurance Program information should serve as the basis for land use and zoning designations in floodplain regions during the implementation phase of the planning process.

Heavy winter rains in the Sacramento Valley and subsequent flooding of the Sacramento River frequently result in severe erosion of the river's banks and loss of valuable agricultural soil and riparian vegetation as well as life and property.

In addition to problems concerning 100-year flooding in the County, there are drainage problems that are unique to the urban and town centers. These problems are created by development in the watershed areas upstream from existing inadequate drainage facilities. The development of watershed areas always increases runoff downstream. This is due to the development of land, which in its current state, absorbs most of the rainfall where paved areas and roof tops do not. This increases the flow of water in the downstream areas, which adversely impacts existing drainage facilities and natural urban waterways.

One solution to the problem is for the County to develop programs to mitigate this effect by imposing fees on new development, which would be accumulated and used for the improvement of urban waterways and facilities downstream from that development, preserving to the extent possible, the natural environment of the urban waterway.

5.2.3 Objectives

FL-1 Protection of public health and safety, both on-site and downstream, from flooding through floodplain management which regulates the types of land uses which may locate in the floodplain, prescribes construction designs for floodplain development, and requires mitigation measures for development which would impact the floodplain by increasing runoff quantities.

5.2.4 Policies

FL-a New development in floodplains shall be regulated through zoning regulations addressing land use type, density, and siting of structures.

FL-b County flood control measures should advance, insofar as possible, the goals of providing for domestic and agricultural water uses, recreation, resource conservation (including streamside vegetation and habitat) and the preservation of the scenic values of the County's water resources.

FL-c Whenever possible, flood control measures should consist of channel diversions or limited floodplain designs which avoid alteration of creeks and their immediate environs.

FL-d The County shall maintain emergency preparedness plans to protect the public from flooding hazards.

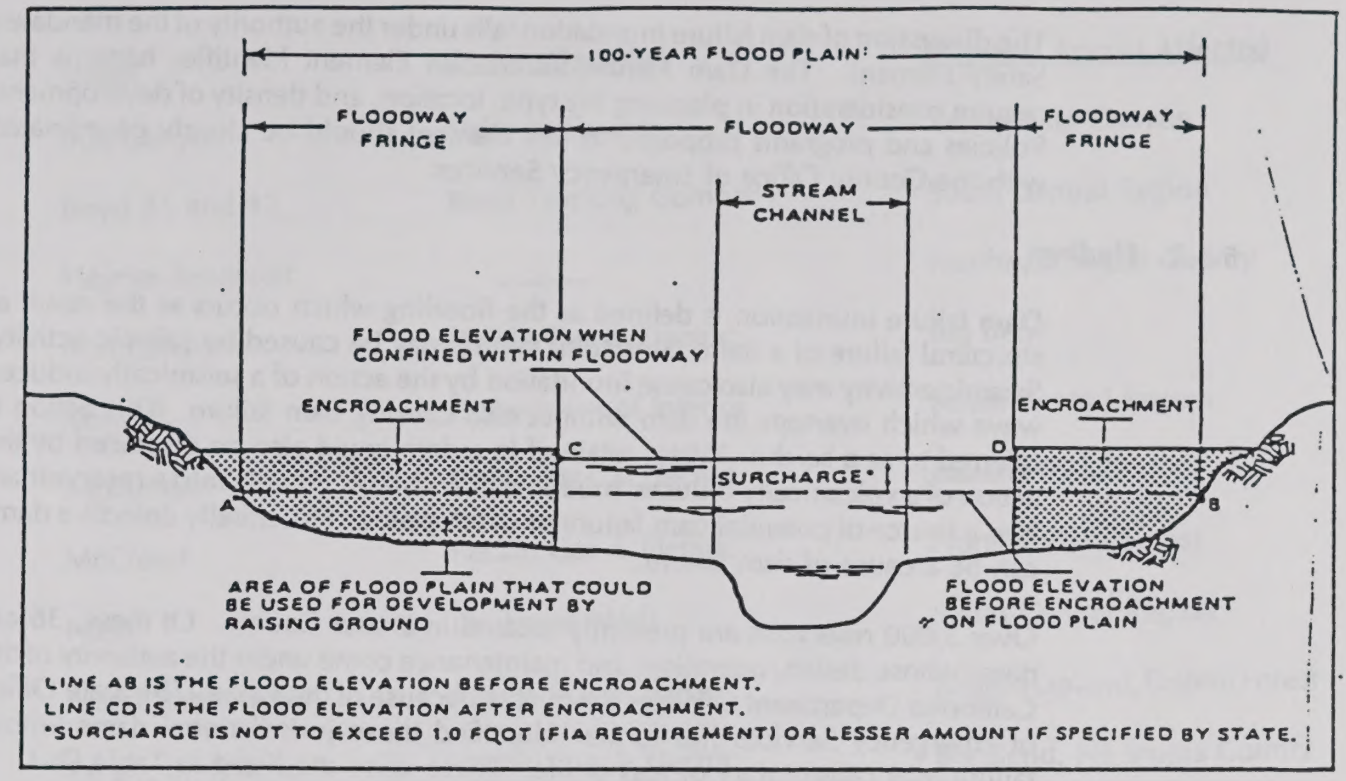
FL-e New critical or high occupancy structures (e.g., schools, hospitals) shall not be located in the 100-year floodplain unless those structures and supporting utilities are designed to prevent damage and service interruption during the 100-year flood. Major access routes to such facilities should not be subject to interruption during a 100-year flood event.

FL-f Known flood hazard information shall be reported as part of every General Plan amendment, zone change, use permit, variance, building site approval, or other land development applications subject to environmental assessment.

FL-g Flood Hazard Maps shall be maintained by the County to aid in the project review process.

FL-h The impacts of new development on the floodplain or other downstream areas due to increased runoff from that development shall be mitigated. In the case of the urban or suburban areas, and in the urban and town centers, the County may require urban or suburban development to pay fees which would be used to make improvements on downstream drainage facilities in order to mitigate the impacts of upstream development.

FIGURE FL-1
Floodplain Schematic



SOURCE: U.S. Department of Housing and Urban Development

5.3 DAM FAILURE INUNDATION

5.3.1 Introduction

The discussion of dam failure inundation falls under the authority of the mandated Safety Element. The Dam Failure Inundation Element identifies hazards that require consideration in planning the type, location, and density of development. Policies and programs proposed in this element should be closely coordinated with the County Office of Emergency Services.

5.3.2 Findings

Dam failure inundation is defined as the flooding which occurs as the result of structural failure of a dam. Structural failure may be caused by seismic activity. Seismic activity may also cause inundation by the action of a seismically induced wave which overtops the dam without also causing dam failure. This action is referred to as a seiche. Water retained in a dam could also be displaced by the action of a volcanically induced mudflow. Landslides flowing into a reservoir are also a source of potential dam failure or overtopping. Structurally defective dams can be a cause of dam failure.

Over 3,000 reservoirs are presently located in Shasta County. Of these, 36 are dams whose design, operation, and maintenance come under the authority of the California Department of Water Resources because of their size. The State Office of Emergency Services has further identified those jurisdictional dams whose failure may cause injury or loss of life. These dams are listed in Table DI-1.

The California Office of Emergency Services has prepared maps showing the areas which would be inundated if the dams listed in Table DI-1 fail. Dam failure inundation information from Shasta and Whiskeytown Dams has been transferred to a map of the SCR planning area which is on file with the Shasta County Public Works Department.

Dam failure inundation hazards present major health and safety implications in the SCR Planning Area, particularly in the vicinity of the Shasta Lake and Whiskeytown Reservoir dams. Failure of Shasta Dam would result in the inundation of most of Redding within less than an hour of failure. Within two hours, all of Anderson and much of the Sacramento River Valley downstream of Redding would be inundated.

Given its smaller size and location relative to existing development, failure of Whiskeytown Dam would be less disastrous. Redding would not be affected, but over half of Anderson would be inundated within two hours of failure. A smaller portion of the Sacramento River Valley downstream of Clear Creek would also be inundated.

During 1990, the Department of Water Resources conducted a special dam safety study for Misselbeck Dam and reservoir which is located on the North Fork of Cottonwood Creek northwest of the Igo-Ono area. Concerns regarding dam safety and potential downstream inundation lead to reduced storage level requirements between October 1 to April 30, until the dam operator corrected outlet and spillway deficiencies.

TABLE DI-1

SHASTA COUNTY DAMS WHOSE FAILURE MAY RESULT IN INJURY OR LOSS OF LIFE

Name	Owner/Operator	Planning Area(s) Affected
Box Canyon	Siskiyou County	Sacramento Canyon
Boyd #1 and #2	Boyd Trucking Company	South Central Region
Haynes Reservoir	———	Northeast Shasta County
Iron Canyon	Pacific Gas & Electric	Big Bend
Keswick	Department of Interior	South Central Region
McCumber	Pacific Gas & Electric	Eastern Forest
McCloud	Pacific Gas & Electric	Northwestern Forest
Nash	Dr. Lewis Nash	South Central Region
North Battle Creek	Pacific Gas & Electric	Eastern Upland, Eastern Forest
Pit #1, 3, 4, 5, 6, 7 Forebay	Pacific Gas & Electric	Big Bend, NE Shasta County
Pit #5, Open Conduit Dam	Pacific Gas & Electric	Big Bend
Whiskeytown	Department of Interior	South Central Region
Shasta	Department of Interior	South Central Region

Source: State of California Office of Emergency Services

As mentioned, the Department of Water Resources' Division of Dam Safety regulates the design and maintenance of large dams. Large dams are those exceeding 15 feet in height or having reservoirs exceeding 15-acre feet capacity. Dams less than this size are not regulated by the Division of Dam Safety.

Considering existing development patterns and trends, particularly in the South Central Region and the unlikelihood of a dam failure, it would be infeasible to preclude future development from locating in dam inundation areas. It is possible, however, to discourage critical structures (hospitals, fire, and police stations) and high occupancy structures (schools, theaters, and public meeting places) from locating in these areas. These policies are designed to reduce the risk of injury or loss of life in the event of inundation and should be addressed by County evacuation preparation plans as well as General Plan policies.

5.3.3 Objective

DI-1 Reduction of the potential for the loss of life from dam failure inundation by developing emergency preparedness plans.

5.3.4 Policies

DI-a Dam Failure Inundation Maps shall be maintained by the County to aid in the project review process.

DI-b When development is proposed in areas adjacent to or downstream from an existing dam, the County shall determine if preparation of a dam failure inundation map is warranted.

DI-c The County should consider developing a system which assures that both small and large privately constructed dams meet all county and state requirements, including for grading.

DI-d The Shasta County Emergency Plan shall provide for early warning and emergency evacuation routes in the event of dam failure.

5.4 FIRE SAFETY AND SHERIFF PROTECTION

5.4.1 Introduction

This element discusses conditions and issues relevant to the protection of public health and safety from fire damage. It also addresses sheriff protection in Shasta County. These topics are required under the state mandated safety element which reads:

"A safety element for the protection of the community from fires ... wildland and urban fires." (Government Code Section 65302(g).

5.4.2 Findings

Wildland and nonwildland fires are the two types of fire hazards.

Wildland Fires

Wildland fires burn natural or wild vegetation located on undeveloped lands. Human activities such as smoking, debris burning, and equipment operation are the major causes (90%) of wildland fires. Lightning causes the remaining 10% of the wildland fires in Shasta County. Whatever the cause, wildland fires present a major safety hazard to rural development located in forest, brush, and grass covered areas. Between 1977 and 1979, there was an average of 435 wildland fires per year in Shasta County. The majority of these wildland fires occurred in the upland areas of Shasta County, where fire hazards are extreme due to an abundance of highly flammable vegetation and long, dry summers.

The California Department of Forestry has devised a fire hazard severity classification system for California's wildlands which assesses the fire potential for wildlands based on three factors: fuel load, climate, and topography. Each of these factors is discussed below.

Fuel Load

Vegetation is the major source of fire fuel. The quantity of available vegetative fuel determines the intensity of a wildland fire. Types of fuel loads are classified into three categories:

LIGHT (GRASS). Includes areas dominated by grasses, annual herbs, and barren land. This is the lightest fuel load; it burns easily, but is the easiest to control.

MEDIUM (SHRUB). Includes areas in which brush, shrubs, and other perennial vegetation less than six feet in height are dominant.

HEAVY (WOODS - BRUSHWOOD). Includes areas in which vegetation six feet or more in height is dominant. This is the hardest vegetative type to start burning but, due to the heavy fuel load, it is the hardest to control once burning.

Climate

Critical to fire control is the weather. The combination of wind, low relative humidity, and seasonal lack of precipitation provides the basis for critical fire weather. The long, dry, hot summers that are representative of California reduce

the moisture in vegetation, thereby increasing its susceptibility to fire. Once burning, low humidity and winds cause a fire to spread rapidly. All wildlands in California experience critical fire weather to some degree, which is the primary reason for the state's notorious fire problem. Critical fire weather is broken into three classes depending on frequency of critical fire weather. Class I areas are least susceptible, Class II more susceptible, and Class III are most susceptible to critical fire weather.

Topography

The influence of topography on fire hazard increases with slope, as steep slopes cause fires to burn faster and increase travel time for emergency equipment. Thus, as slope increases, the ability to control fire decreases.

Hazard Classifications

These factors are combined in matrix form to derive three wildfire hazard classifications: moderate, high, and extreme, as shown in Figure FS-1. Wildland fire hazard classifications have been mapped for each of the ten Shasta County planning areas.

Wildland fires in developed areas are difficult to control even when adequate equipment and personnel are available, as residential intrusion requires the deployment of fire fighting techniques and equipment normally not used in fighting wildland fires. Structural fires must be extinguished with large amounts of water, whereas wildland fires are controlled by containing the blaze and allowing the flames to die out. In order to protect vulnerable buildings from wildland fires, fire fighting resources are usually spent protecting the structures rather than controlling the fire. This frequently results in larger, more costly fires with greater destructive potential.

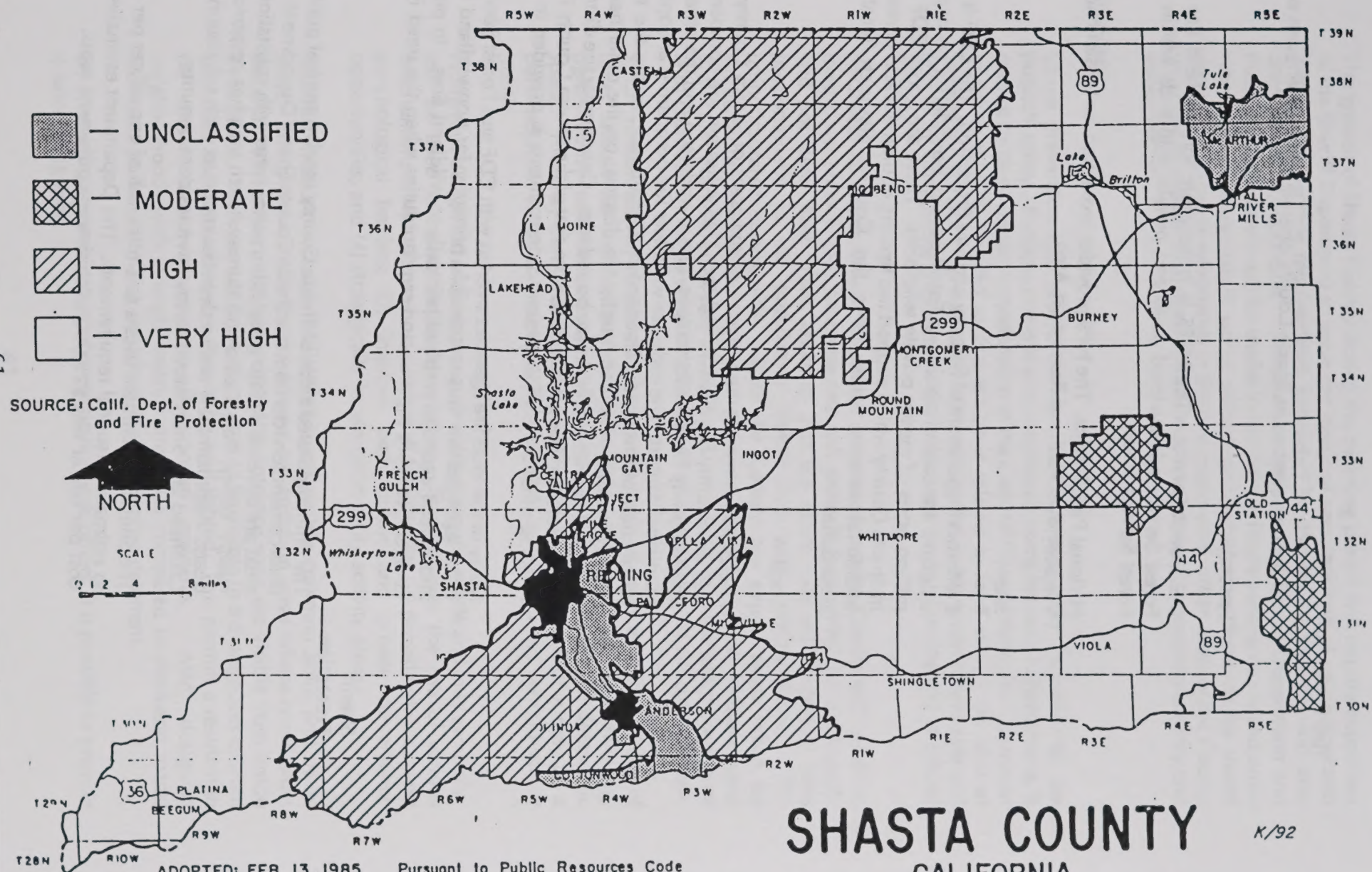
As a general rule, wildland fire hazards do not preclude development; yet they do require that development meet special standards commensurate with the degree of risk. The California Department of Forestry and Fire Protection has prepared, and Shasta County has adopted into its development standards Fire Safety Standards for Parcel Maps and Subdivisions in Shasta County. These development standards address access, road widths, bridges, building construction, and hydrant and water systems. A section on mitigation measures is also included. The proposed standards are particularly helpful in that they directly relate to fire hazard severity classifications.

Nonwildland Fire

Nonwildland fires include structural, chemical, petroleum, electrical, vehicle and other man-made material fires. Nonwildland fires, as opposed to wildland fires, also pose the greatest threat to human life and property. As these fires occur predominantly in urban areas, future urban development in Shasta County will undoubtedly increase the need for fire protection services. In recent years, however, local governments in California have been confronted both with significant increases in the cost of providing fire protection services and a diminished ability to meet these costs due to Constitutionally imposed constraints on their ability to tax.

FIGURE-FS-1

FIRE HAZARD SEVERITY ZONES



ADOPTED: FEB. 13, 1985 Pursuant to Public Resources Code Sections 4201—4203

SHASTA COUNTY
CALIFORNIA

K/92

Fire Protection

Fire Control agencies in Shasta County operate at all three levels of government.

Federal -

U.S. Forest Service. The USFS is responsible for wildland fire control on all Forest Service administered lands and private wildlands within and adjoining Forest Service lands.

National Park Service. The NPS provides protection for Lassen National Park and Whiskeytown National Recreation Area.

State -

California Department of Forestry and Fire Protection. The CDF is responsible for wildland fire control outside of Forest Service boundaries on approximately 1.2 million acres of mostly private wildlands. There are seven CDF Ranger District in Shasta County which support fire fighting equipment and personnel, and three additional stations which serve the County, although located outside its boundaries.

Local -

Fire agencies serving the unincorporated areas of Shasta County include twelve (12) community fire districts, eighteen (18) volunteer fire companies, and two (2) Shasta County Fire District stations, one at Anderson and the other at the Redding Municipal Airport. The eighteen volunteer fire companies are operated under the jurisdiction of the Shasta County Fire Department, as are the two County Fire District stations. The community fire districts, on the other hand, are separate legal entities with legally drawn boundaries. Community fire districts have boards of directors and budgets separate from that of the Shasta County Fire Department. A listing of County fire districts and departments is provided in Table FS-1.

Many of the local fire agencies overlap with CDF and Forest Service jurisdictions. Local agencies are thus responsible primarily for nonwildland fires, while state and federal agencies respond primarily to wildland fires. In practice, however, all agencies work together and overlap duties when the need is present.

Sheriff Protection

The unincorporated areas of Shasta County receive general public safety and law enforcement services from the Shasta County Sheriff Department. Unincorporated areas are covered by four geographic patrol areas with substations in Pine Grove, Happy Valley, Palo Cedro and Burney. Each area has responsibility for several beats. Approximately twelve deputies report to each substation. In addition, the Lakehead and Shingletown areas have resident deputies.

The Sheriff Department uses a rule of thumb of one officer per 1,000 population to estimate personnel requirements. The Department estimates the 1982 annual cost per officer was $25,000 exclusive of equipment costs.

The growth of Shasta County during the planning period will require expansion of the Sheriff Department to serve the needs of new residents of unincorporated areas. The service requirements generated by the tourist industry will also continue to be significant. Coordination between the Sheriff Department and Planning Department will be useful in identifying future service needs and areas where development could occur without generating new demands for sheriff protection. New developments in the unincorporated, urban areas of the County will need to use physical designs that develop a sense of community identity and self-protection.

Defensible Space

Crime prevention and protection from crime is especially important to the public's safety. Because crime is a tremendously complex social phenomena, it cannot be given proper consideration in the General Plan. Instead, the discussion of crime must be limited to that which is related to land use - - the idea of "defensible space." This has to do with making our living environment safe and secure by considering crime prevention measures in site planning and structural design.

As Shasta County continues to grow, it is assumed that the County will not differ from other areas in that the crime rate will grow, it is assumed that the County will not differ from other areas in that the crime rate will grown at least proportionally to the population growth rate and possibly faster. The unincorporated communities within the County can expect more urban lot subdivisions, more apartments, and more condominiums. All of these need protection from crime. A way of making our environment safer and more secure is to consider crime prevention measures in site planning and structural design.

Since humans display territorial behavior, the limits of one's territory and that of other should be well defined. This includes the area outside a dwelling, perceived by residents as outdoor extensions of their dwelling; their defensible space. This may be the entire area inside one's property lines or it may be a patio adjacent to an apartment. All other areas are considered semiprivate or public.

Numerous design techniques, many of which are quite subtle and only symbolic, can be used to create defensible spaces. This involves the use of various mechanisms which (1) promote a sense of territoriality; (2) provide physical and psychological barriers; (3) improve both public and private surveillance opportunities; and (4) strategically locate community activity areas.

Another measure includes well lighted and visible common areas and travel ways. Unlighted corridors and hallways are common areas where crime often occurs. Windows should be designed so entrance ways are visible from inside a residence. Walkways and entrances should be visible to the neighbors or from the street and these entrances should be well lighted. This permits a resident to be under natural observation from other residents. Also, designing neighborhoods with through, interior streets (as compared to dead-end roads) facilitates police patrolling, which in itself is a crime deterrent.

By employing a combination of these devices and others, it is possible to provide a safer living area.

TABLE FS-1

SHASTA COUNTY FIRE DEPARTMENTS AND FIRE DISTRICTS

Fire Departments

19 Volunteer Fire Companies	12 Fire Districts
Bella Vista	Anderson (unincorporated areas)
Big Bend	Burney
Cassel	Castella
Centerville	Central Valley
French Gulch	Cottonwood
Hat Creek	Fall River Mills
Igo-Ono	Happy Valley
Jones Valley	McArthur
Keswick	Mountain Gate
Millville	Shasta
Montgomery Creek	Shasta College
Oak Run	Summit City
Old Station	
Palo Cedro	
Platina	
Shasta Lake	
Shingletown	
Soldier Mountain	
West Valley	

5.4.3 Objectives

FS-1 Protect development from wildland and nonwildland fires by requiring development to incorporate design measures responsive to the risk from this hazard and by encouraging development to locate in moderate fire hazard areas.

FS-2 Protection of life and property from crime by encouraging the incorporation of defensible space design techniques in the physical design of new development.

5.4.4 Policies

FS-a All land divisions and developments shall be required to conform to County Fire Safety Standards.

FS-b Known fire hazard information should be reported as part of every General Plan amendment, zone change, use permit, variance, building site approval, and all other land development applications subject to environmental assessment.

FS-c Fire Hazard Maps shall be kept on file by the County and used in conjunction with the adopted fire safety standards and development standards.

FS-d New development in areas designated Urban and Suburban should be encouraged to incorporate site planning and structural design features designed to deter crime.

FS-e Development in areas requiring additional levels of police and fire services shall participate in offsetting costs for the additional services.

FS-f The Sheriff and Shasta County Fire Agency should annually recommend to the Planning Commission standard conditions to apply to all projects relating to police and fire services including assessments for new services.

5.5 NOISE

5.5.1 Introduction

Government Code Section 65302(f) requires the preparation of a noise element, the primary purpose of which is to serve as a guideline for use in the development of a land use element designed to achieve a noise compatible land use pattern. Land uses are both receivers and generators of sound. A noise compatible land use pattern is one in which noise sensitive land uses are not adversely affected by surrounding uses, and in turn noise intrusive land uses are located in environments tolerant of their noise impacts. Supporting documentation for this element is found in Appendix B.

5.5.2 Findings

The noise environment of Shasta County is not the same in all parts of the County and is directly related to the pattern of urbanization and associated transportation networks. Urban areas associated with Redding and Anderson are exposed to the higher noise levels in the County, while the rural areas are extremely quiet. This difference suggests that different approaches to the issue of environmental noise are required in each area. In general, the existing quiet areas of the County should be protected from noise generating land uses which could be located in more noise tolerant areas of the County.

Within the urban areas of the County, the major noise sources are associated with the circulation system. Analysis of the increases in the future traffic levels anticipated for this system indicate that adverse noise impacts, with certain exceptions, will be generally limited. Accordingly, the major land use noise compatibility issue in these areas is concerned with relating new development to the existing noise environment. This environment is documented in a noise environment map of the SCR area and Table 5 of Appendix B.

The exceptions to this general statement relate to areas which will experience significant traffic increases during the planning period. Traffic will increase in the Central Valley area and the corresponding noise increases will have major implications for existing and new development. A similar observation applies to the areas of new urbanization anticipated in the areas northeast and east of Redding. In these areas, the design of transportation improvements and the siting of new development should carefully consider noise impacts.

The rural areas of the County are considerably quieter than the urbanized areas of SCR. However, these rural areas are similar to SCR in that the major noise source is the circulation system, and future increases in traffic using this system will not result in significant noise impacts. Again, the major land use noise compatibility issue is concerned with relating new development to the existing noise environment, which is documented in Table 4 of Appendix B.

Figure N-1, along with the Noise Element policies, supply the general guidelines necessary to achieve practical land use decisions in regard to noise. The noise exposure levels indicated in Figure N-1 are for exterior noise levels. There are two general situations for which this figure will be used: (1) either for locating noise sensitive uses near existing or potential noise generators, such as locating a residential subdivision near an existing airport; or (2) locating noise generators

near noise sensitive areas. For example, if a residential subdivision was proposed near Interstate 5, the exterior noise level should be at or below an acceptable level (60dBA CNEL) or the developer may be required to attenuate the exterior noise to that level. In cases in which outdoor noise cannot be attenuated, such as near an airport, the developer may instead be required to attenuate the indoor noise levels to 45dBA CNEL. In another example, if a noise generating use, such as an industrial use, is proposed near an existing residential area, the industrial use must attenuate its noise level at the residential property line to 60dBA CNEL or less. In no cases shall exterior noise levels exceed those recommended in Table N-1, unless all reasonable exterior noise mitigations have been applied and interior noise levels are attenuated to 45dBA CNEL for residential land use or for other noise sensitive uses.

The noise readings may be on either the CNEL or L_{dn} scale and shall be applied only to frequently recurring noise events using commonly accepted methods. Explanations of the CNEL and L_{dn} noise scales are contained in Appendix B.

5.5.3 Objectives

N-1 Protection of noise sensitive areas of the County by regulation of new noise-generating development.

N-2 Protection of noise sensitive new development from existing and future noise generators by regulations encouraging each to locate within compatible noise environments.

N-3 Protection of established noise-generating development from noise sensitive new development.

5.5.4 Policies

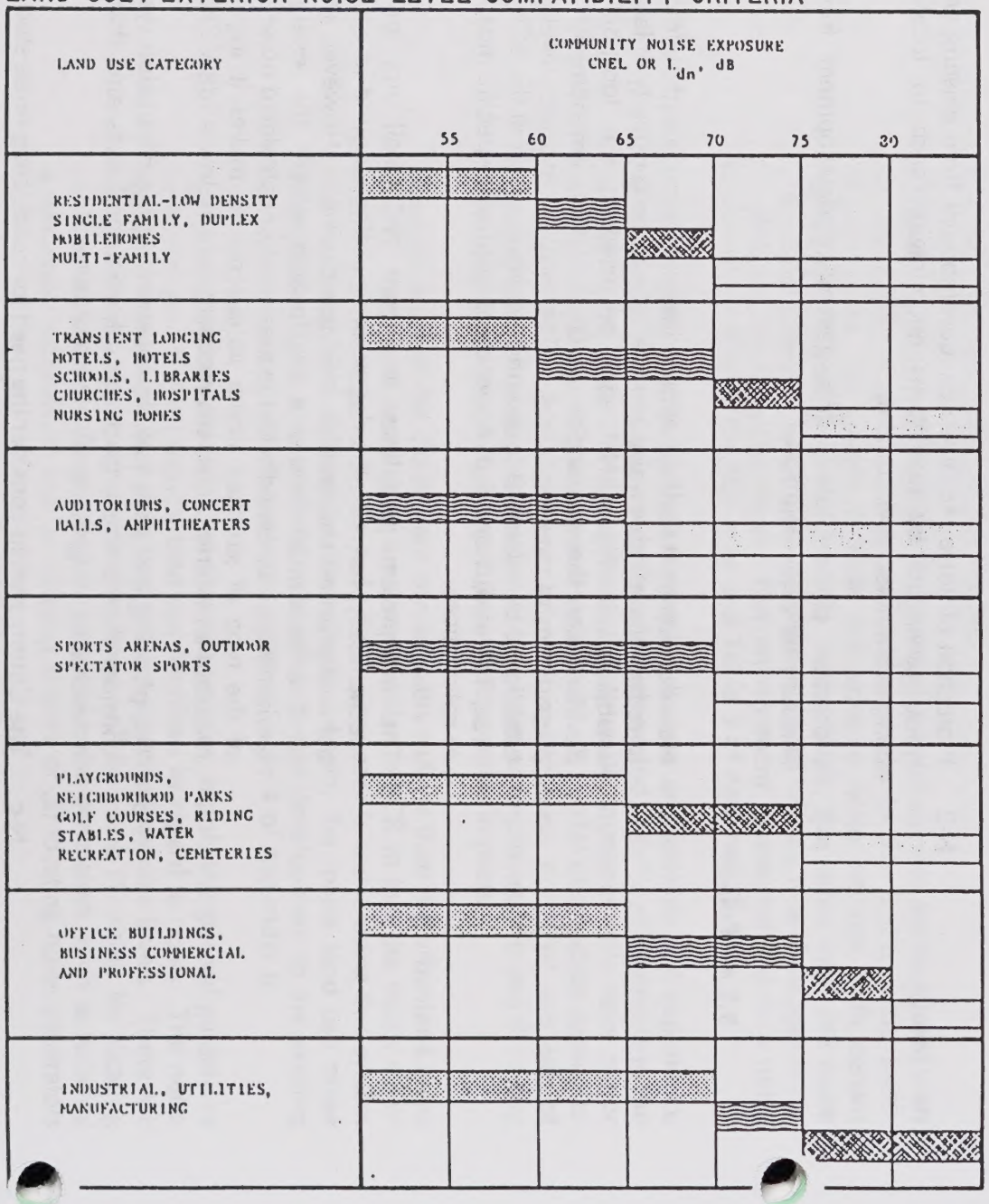
N-a New development shall use appropriate site planning and building design to reduce undesirable noise impacts. The noise sensitivity of land uses as established in Figure N-1 shall be used in the location of new development, the preparation of General Plan amendments, and the preparation of specific plans. The noise exposure level shall be established by reference to the noise exposure map of the SCR Planning Area, Tables 4, 5 and 6 of Appendix B or project-specific measurements or calculations.

The interpretive guidelines in Figure N-1 shall not be applied mechanically, but with the degree of flexibility required in each case to achieve a sound and feasible land use decision. However, in no case shall a residential land use be located where the existing noise environment, combined with the measured or calculated noise reduction of the type of structure under consideration, makes it impossible to maintain an interior noise environment at or below 45dBA CNEL.

N-b The planning and design of improvements in the circulation system shall consider their noise impacts on adjacent land uses and shall include measures to mitigate significant noise impacts.

N-c The County should consider the need for conducting noise studies as part of the mid-1990's five year update.

FIGURE: N-1
LAND USE / EXTERIOR NOISE LEVEL COMPATIBILITY CRITERIA



INTERPRETATION

Normally Acceptable - Specified land use is satisfactory within the range specified, based on the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable - New development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

Normally Unacceptable - New development should generally be discouraged. If new development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable - New development should generally not be undertaken.

5.6 HAZARDOUS MATERIALS

5.6.1 Introduction

Hazardous materials include all toxic, flammable, combustible, corrosive, poisonous, and radioactive substances. An important sub-category of hazardous materials are hazardous wastes. Hazardous wastes should not be confused with solid wastes, which are discussed in the Community Development Element Group.

Hazardous waste is defined as "a waste, or combination of wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may either:

- cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness, or;
- pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, disposed of, or otherwise managed." (California Health and Safety Code Section 25117.)

The discussion of hazardous materials and wastes in the General Plan falls under the authority of Government Code Section 65302(a) and (g); the land use and safety elements.

5.6.2 Findings

Records of hazardous materials generation are maintained by the Hazardous Materials Management Section, California Department of Health Services. The most hazardous materials generated in the County are associated with mining activities, particularly extraction of copper, gold, and silver ores, bituminous coal, and natural gases. Pesticides and fertilizers are also very hazardous substances.

The three major concerns regarding hazardous materials are their transportation, storage, and operational uses.

Transportation

Accidents involving hazardous materials during transport pose threats to public health and safety, particularly when accidents occur along heavily traveled routes such as Interstate 5 and the Southern Pacific Railroad line in Shasta County. Transportation of hazardous materials presents perhaps the highest disaster potential in the County. Regulations regarding the safe transport of hazardous materials and hazardous wastes should be contained in the Shasta County Emergency Plan.

Storage

The disposal and storage of hazardous materials has substantial implications for land use planning, as exposure to such materials may cause adverse health effects.

Effective January 1, 1981, Assembly Bill 2370 (1980) modified the California Health and Safety Code to give the Department of Health Services (DHS) authority to restrict certain land uses within 2000 feet (the "border zone property") of "hazardous waste property", defined as land where a hazardous waste disposal facility exists or has existed in the past.

If a permit is granted to any of these facilities, and there exists a significant disposal of hazardous waste on-site, the property is Hazardous Waste Property (HWP) by definition. No public hearing must be held prior to designation. The land surrounding these sites and extending up to 2000 feet from the location of disposal is potentially subject to designation as Border Zone Property (BZP). DHS has recommended that Shasta County inform all applicants for subdivision maps and building permits of the requirement that they must apply for a determination from DHS whether the project should be designated as a hazardous waste property or border zone property, if the following conditions exist:

- They are an owner, lessor or lessee of property within 2000 feet of one of the facilities listed above, and

- They plan to construct within the next calendar year a structure to be used for one of the following purposes:

  - a residence, including any mobile home or factory built housing constructed or installed for use as a permanently occupied human habitation;
  - a hospital for humans;
  - a school for persons under 21 years of age;
  - a day care center for children;
  - any permanently occupied human habitation other than those used for industrial purposes.

DHS regulations prohibit residential land uses including hospitals, day care centers and schools on hazardous waste properties, as well as any new land uses, except where variances are granted. State regulations further prohibit subdivision of such lands except where a subdivision would separate designated hazardous waste property from non-designated property. Land owners of these properties are additionally required to create easements permitting state officials from DHS to enter their lands in order to monitor hazardous waste storage.

State regulations regarding border zone properties are similar to those affecting designated waste properties with the exception that new land uses may occur on these lands without requiring a variance from the State Department of Health Services.

State regulations also provide that if the County knows or has probable cause to believe that any land within the County is a hazardous waste property or a border zone property, then the County may apply to DHS for determination whether the land should be designated under either classification.

According to DHS records, two possible hazardous waste facilities are located in Shasta County: one in Central Valley and a second in the vicinity of Shasta General Hospital.

On-site storage of hazardous materials is also regulated by the state through a permit process. An industry which uses corrosive chemicals, for example, must obtain a use permit from the Department of Health Services prior to operation. In addition, the industry or hazardous substance user may be required to obtain a conditional use permit from the city and/or county government. Storage or disposal of materials with potentially hazardous impacts on nearby watercourses may also be subject to requirements established by the Central Valley Regional Water Quality Control Board.

Permits for offsite storage of hazardous materials are not required unless the materials in question are "extremely hazardous" as defined by the California Administrative Code.

Use

Hazardous materials are used in many forms and activities throughout Shasta County. The most heavily used substances are herbicides and fertilizers used by foresters and agriculturalists.

Controlling timberland brush is an important issue in Shasta County because of the County's economic dependence on timber production. For many years, foresters have used herbicides as part of vegetative management programs designed to prevent brush competition with tree seedlings. Some chemicals contained in herbicides, however, are potentially dangerous air, water, and soil pollutants.

Some fertilizers and pesticides used by agriculturalists also pose potential threats to the health and safety of the human and natural environments. Adverse health effects of some fertilizers and pesticides are most threatening during periods of heavy rainfall when these chemicals may be washed off the land into streams and rivers, creating health hazards for human and wildlife populations. Run-off containing these chemicals may also penetrate into the soil and eventually contaminate the ground water supplies. (See also the Water and Water Quality Element.)

Regulations regarding the use of these hazardous materials are administered by the State Department of Food and Agriculture in conjunction with the State Health Department. Any operation which discharges wastes into water bodies must also meet discharge requirements established by the Central Valley Regional Water Quality Control Board.

5.6.3 Objectives

HM-1 Protection of life and property from contact with hazardous materials through site design and land use regulations and storage and transportation standards.

HM-2 Protection of life and property in the event of the accidental release of hazardous materials through emergency preparedness planning.

5.6.4 Policies

HM-a The County shall make every effort to inform applicants for discretionary and non-discretionary projects which are located within potential border zone property of known hazardous waste facilities that they must comply with State requirements regarding hazardous waste facilities. A map shall be prepared and maintained which identifies these areas.

HM-b Shasta County shall maintain an emergency preparedness plan for hazardous materials.

HM-c Shasta County shall adopt policies for hazardous materials use, transportation, storage and disposal as required by State las.

HM-d Shasta County shall adopt policies for the protection of life and property from contact with hazardous materials through site design and land use regulations.

HM-e Any proposal for development of a disposal site for hazardous materials in Shasta County shall be reviewed closely to ensure that no significant environmental impacts will result from the project. Review of such project may include a determination of what type of hazardous materials may be disposed of at the dump site.

6.0 RESOURCES GROUP

The Resources Group includes General Plan elements addressing the preservation, management, and utilization of Shasta County's natural resources. The individual elements included in the Shasta County General Plan reflect both required and optional subject areas outlined in the General Plan Guidelines, and are listed below.

- Agricultural Lands
- Timber Lands
- Minerals
- Energy
- Air Quality
- Water Resources and Water Quality
- Fish and Wildlife Habitat
- Scenic Highways
- Open Space and Recreation
- Heritage Resources

As a group these elements address the range of opportunities presented by a diverse County resource base including opportunities for resource management, tourism, recreation, and aesthetic enjoyment. Together these opportunities contribute to the County's attractiveness and desirability for residence.

These resources are all sensitive to human activities and may be destroyed or degraded if not addressed in the planning process. Thus, while it is important to maintain these resources for their direct and indirect benefits to people, protection and maintenance for their inherent ecological values must be recognized as well.

6.1 AGRICULTURAL LANDS
(as amended May 1994 and May 1995)

6.1.1 Introduction

Agricultural land uses are a major component of Shasta County's resource land base. They are also a major element in defining the quality of life available to the residents of Shasta County. Were agriculture to lose its land-based prominence in the County, the rural character and country living so valued by its residents and so important to its economy would decline and eventually vanish.

This element encompasses portions of three mandatory elements, namely; land use, conservation, and open space. The pertinent portions of these elements are quoted below.

> A land use element. . . designates the proposed general distribution and general location and extent of the use of land for. . . agriculture . . . (Government Code Section 65302(a).)
>
> A conservation element for the conservation, development, and utilization of natural resources including . . . soils . . . (Government Code Section 65302(d).)
>
> Open space for the managed production of resources, including . . . rangeland, agricultural lands, and areas of economic importance for the production of food or fiber . . . (Government Code Section 65560(b)(2).)

Findings

6.1.2 Contribution to Shasta County

The County's total land area in farms was 377,353 acres in 1987. (1) Agriculture is not the dominant industry in Shasta County, but it does account for a significant segment of the County's economic base. In 1989, the total market value of farm products was $53.5 million, over 43% of which was represented by the sale of livestock and livestock products. (2) In recent years, the U.C. Extension estimates that for every dollar of direct agricultural production in Shasta County, another 1.8 dollars are produced elsewhere in the local economy.

In addition to its economic contribution, the agriculture industry is in large part responsible for the rural character of the County. Farming necessitates a close relationship between the farmer and the land, fosters close relationships with family and community, and encourages self-reliance and independence. These characteristics define a way of life which tends to be assumed by those living in agricultural areas, even though they are not directly engaged in agriculture.

Farmland retention can play an important role in the support of wildlife values through the effects it has on conservation of wildlife habitats. Potentially the most fertile wildlife habitat is the forest edge or point where natural vegetation bounds meadows, pastures or croplands. ' Often such areas (called ecotones) contain greater variation of species and their numbers are much greater than in the

communities to either side. As farmland is developed for urban and suburban uses, the available habitat for most field and woodland edge species disappears, resulting in a decline or elimination of their populations.

Other indirect benefits from maintaining the agricultural landscape is to allow protection of watersheds and natural drainage courses. It is also important to recognize the aesthetic values of farmland. Agricultural lands provide productive, privately maintained open space which contributes to the open, natural landscape of much of Shasta County. Cumulatively, these and other indirect benefits should be considered as important as direct benefits and should be evaluated whenever new development presents a potential to significantly impact agricultural lands.

It is important to understand that agricultural land can be easily degraded and converted to non-agricultural uses; however, it is a resource that can not be easily replaced. It is a non-renewable resource and once lost or degraded, may never be restored to its original quality. In most cases, the natural fertility of "artificially" created agricultural land is low and therefore requires a high rate of fertilizers, energy and capital input. In the long term, existing agricultural lands in Shasta County may become increasingly valuable as losses occur elsewhere and as urban areas continue to expand. Shasta County, however, contains a pattern of agricultural geography which allows it to avoid significant losses of agricultural lands if appropriate policies are implemented.

While much of California's agricultural system is dominated by national and global agricultural economics, maintaining sufficient agriculturally productive lands to serve as local sources of food and fiber for subregional economies could become a critical long term issue, given the potential for changed systems of agricultural economies and the fact that the loss of productive agricultural land is irreversible. While total local self-sufficiency in food production may never be a necessity or a possibility, the continued existence of agriculture in Shasta County does provide the option for some degree of local self-sufficiency in food production. In this regard, some interesting facts may be drawn from the 1989 Shasta County Agricultural Crop Report. During this year, Shasta County's agriculture industry produced:

- enough milk to provide each resident one-half cup of milk per day;
- enough beef for each resident to have 117 pounds per year;
- enough grain for each resident to have 980 ounces per year;
- enough honey to supply each resident with 2.2 pounds per year.[1]
- $8,461,600 of strawberry nursery stock for California, U.S. and worldwide export. (3)

6.1.3 General Characteristics of Farms

In Shasta County, the number of farms has been slowly increasing and the average farm size has been decreasing since 1969, as shown in Table AG-1. This is the opposite of the national trend toward fewer but larger farms, though it

reflects a phenomenon occurring throughout California and a number of other states, such as Arizona, Florida, Idaho, Oregon, Washington, and Maine. Since 1969 there has been a significant loss of agricultural land in Shasta County, amounting to a loss of 171,142 acres, or 31% decline from 1969 to 1987. According to the most recent U.S. Census of Agriculture, approximately 32% of all farms were between 10 and 49 acres in size, as shown by Table AG-2. This in part explains why only 40% of the total land in farms is enrolled in Williamson Act Contracts which under Shasta County regulations require a minimum of 100 acres. (4)

TABLE AG-1

NUMBER AND SIZE OF SHASTA COUNTY FARMS*

	1969	1978	1987
Number of farms	746	1,046	899
Land in farms (acres)	548,494	407,914	377,352
Average size of farm (acres)	735	390	420

*To enable 1969 data to be compared with later data, the definition of farm used in this Table is that used in the 1969 Census of Agriculture.

Sources: 1978 Census of Agriculture, Preliminary Report, Shasta County, Page 4.
1974 Census of Agriculture, State and County Data, Page IV-259.
1987 Census of Agriculture, State and County Data, Page 188

TABLE AG-2

FARMS BY SIZE *

Farms by Size	1978 Number/%		1987 Number/%	
Less than 10 acres	129	16%	226	25%
10 to 49 acres	257	32%	290	32%
50 to 179 acres	176	22%	159	18%
180 to 499 acres	115	14%	96	11%
500 to 999 acres	50	6%	44	5%
1,000 to 1,999 acres	38	5%	34	6%
2,000 acres or more	44	5%	50	5%
Total	809		899	

*Definition of farm is that used in 1978 and 1987 Censuses of Agriculture which differs from that used in Table AG-1.

Sources: 1978 Census of Agriculture, Preliminary Report, Shasta County, page 1. 1987 Census of Agriculture, page 188

The size of farms is of importance because of its economic implications for the farm operator, which in turn has implications for land use regulations applicable to farm lands. Discussions of appropriate farm sizes frequently focus on the concept of the economically viable farm unit. This concept has its origins in the Reclamation Act of 1902 and addresses the question of the minimum size farm operation capable of sustaining a household. In Shasta County, and increasingly throughout the United States, the classic definition does not encompass all the complex policy considerations associated with planning for agricultural lands. There are various types of farm operations in Shasta County, and each has a different definition of viable farm unit. If County agricultural protection policy were to be based solely on the classic definition of an economically viable farm unit as provided by some standard based on household income, it would be at variance with the present structure and trends of agriculture nationwide. Therefore, it is necessary to examine the characteristics of farm operators.

6.1.4 Characteristics of Farm Operators

The 1987 Census of Agriculture Preliminary Report indicates that farming in Shasta County is largely a family-oriented, owner operated enterprise. Approximately 88% of the County farms are operated by individuals or families, with partnerships (7%) and corporations (4%) accounting for 11% of farm operations. About 92% of all farms are operated by either full or part owners.

As shown in Table AG-3, 81% of Shasta County farms had sales of less than $20,000 in 1987. The sales figures in this table are not in constant dollars, so comparisons are difficult. The important point made by this table is the substantial role in Shasta County agriculture played by smaller farms.

Tables AG-4, AG-5, and AG-6 reveal that in Shasta County farm operators are increasingly involved in goods and services operations. Rather than exclusively being producers of goods (agricultural products), many farmers provide various services as well. As shown in Tables AG-4 and AG-5, in 1987, 62% of all farm operators had a principal occupation other than farming, and 52% of farm operators worked 100 or more days off the farm. Some off-farm work was provided for other farm operations in the form of custom farming services. However, most off-farm work was performed in nonagricultural pursuits, probably in employment opportunities associated with urban centers.

There are three types of farmers in Shasta County. They are:

- the full-time farm operator
- the part-time/second income farm operator.
- the custom farmer

TABLE AG-3

SHASTA COUNTY FARMS BY VALUE OF SALES

	1978		1987	
	Number/%		Number/%	
Sales of $20,000 or more	133	16%	170	19%
$100,000 or more	32	4%	54	6%
$ 40,000 to $99,999	44	5%	46	5%
$ 20,000 to 39,999	57	7%	70	8%
Sales of less than $20,000	676	84%	729	81%
$10,000 to $19,999	87	11%	87	10%
$ 5,000 to $9,999	122	15%	120	13%
$ 2,500 to $4,999	144	18%	125	14%
Less than $2,500	323	40%	397	44%

Sources: 1978 Census of Agriculture, Preliminary Report.
1987 Census of Agriculture, page 156

The full-time farm and ranch operator is defined as an individual, family, or firm who usually owns the farm he/she operates in Shasta County and who considers agriculture his/her principal occupation. The full-time farm operator requires an area of land of a combined size and quality sufficient to provide the exclusive or primary source of annual income for the entity conducting the operation. This land area may comprise several discontiguous units.

TABLE AG-4

PRINCIPAL OCCUPATION OF FARM OPERATORS

	1978		1987	
	Number	%	Number	%
Farming	324	40%	389	43%
Other than Farming	485	60%	510	57%

Sources: 1978 Census of Agriculture, Preliminary Report.
1987 Census of Agriculture, page 232

TABLE AG-5

FARMS WITH OPERATORS REPORTING
DAYS OF WORK OFF FARM

	1978		1987	
	Number	%	Number	%
Any off-farm work	518	64%	529	62%
100 days or more	434	57%	446	52%

Sources: 1978 Census of Agriculture, Preliminary Report.
1987 Census of Agriculture, page 232

TABLE AG-6

FARMS WITH OPERATORS PROVIDING
CUSTOM FARM SERVICES FOR OTHERS

	1978	1987
Number of Farms	53	57
Income	$296,000	$364,000

Sources: 1978 Census of Agriculture, Preliminary Report
1987 Census of Agriculture, page 180.

Part-time or second income farming is a significant trend in Shasta County and is part of a larger phenomenon occurring in industrialized countries throughout the world. (5) Individuals in this group are much more diverse than the members of the full-time category and include:

- Individuals with a significant outside income who have invested primarily in a homesite and lifestyle and who may, particularly prior to the Tax Reform Acts of 1976 and 1986, have been motivated by the provisions of the U.S. income tax laws to invest in Shasta County's agriculture.

- Individuals now employed elsewhere but who intend either during the working years or after retirement to become an active participant in agriculture.

- Individuals with significant capital assets who seek a secure investment vehicle for these assets, while at the same time, measuring return in terms of personal satisfaction as well as annual income.

- Families or individuals, possibly of rather modest means, who make a deliberate trade-off between economic return from agriculture and the ability to enjoy both an income and a lifestyle that are clearly and directly the result of individual efforts.

- Those who produce small volumes of vegetable and fruit truck crops to be sold directly to the consumer and by other direct marketing activities, such as farmer's markets.

While in 1987 the County's average farm size was 420 acres, 25% of its farms were less than 10 acres and 57% were 49 acres or less. These facts suggest a strong interest in small scale agriculture in Shasta County and need to recognize part-time farming as a significant land use type by allowing a range of densities that are best suited to each unique local area of the County.

Whatever their particular motivations, part-time farmers make several unique contributions to the agriculture industry of Shasta County. Because part-time farmers have alternative, non-farm sources of income and are able to farm more intensively, their ability to operate a successful farming operation can be enhanced. In some cases, they are able to conduct farming operations on lands which could not be as successfully farmed by less intensive full-time operations.

A third, but much less influential type of farming operation can be characterized as the custom farmer. The custom farmer is an individual who owns or rents and operates a farm in Shasta County. While the custom farmer considers agriculture his/her principal occupation, the farm operation he/she owns or rents does not provide the exclusive source of his/her income. Money earned by performing custom farming services for others is an important source of income to the custom farmer. It is important to note the critical role played by the custom farmer in the continuity of agriculture in Shasta County. Custom farmers provide services necessary to both full and part-time farm operations.

Understanding that the motivations and economic circumstances of each type of farm operator differs from those of the other types demonstrates that there is no uniform definition of "viable farm unit." The land area required by the full-time farmer will generally be larger than that required by the part-time farmer. The agricultural element must recognize these distinctions and provide areas of land throughout the County of sufficient size and resource value so that all types of farm operators may be accommodated.

6.1.5 Characteristics of Agricultural Areas and Commodities

For the purpose of the Agricultural Element, Shasta County is divided into three types of agricultural areas and subunits within each area, as follows:

- Valleys
  - Sacramento River and tributaries
  - Fall and Pit Rivers
- Foothills
  - Western Uplands
  - Eastern Uplands
- Large Mountain Meadows
  - Goose Valley
  - Burney Creek Valley
  - Cayton Valley
  - Hat Creek Valley

Valleys

The valleys of the Sacramento River and its tributaries, including Churn, Cottonwood, Anderson, Stillwater, Cow, Bear, Battle and Clover Creeks, contain some of the most productive agricultural land in the County. Many hundreds of acres of land in these valleys are classified as prime, unique farmlands or farmlands of statewide importance.

Unfortunately, all of these lands are subject to urbanization pressures. Urban services such as community sewer and water and paved County-maintained roads are or could be made available to most of these lands. The classic example is the Churn Creek Bottom area which lies south of the Redding City limits and is traversed by Interstate 5 and Churn Creek Road. There is the potential that recent development proposals in the Churn Creek Bottom have taken on a character which could promote non-agricultural development of the area.

Very few of these agricultural areas are subject to Williamson Act contracts. It is problematic whether this is the result of the proximity of urbanization, the 100 acre minimum limit currently in effect for Williamson Act contracts in Shasta County, or both. Many of the agricultural lands now under contract have filed notices of non-renewal which are coming due. The current primary agricultural uses of these lands are field crops orchard crops, strawberry nursery stock, and irrigated pasture.

In addition to the high quality of their soils, agricultural lands in this area enjoy a long growing season of from 172 to 205 days. (6) Water from either the Anderson-Cottonwood Irrigation District, Clear Creek Community Service District,

surface diversions of streams, or groundwater is available. Excellent transportation access exists.

The Fall and Pit River Valleys contain highly productive agricultural lands. The value of these lands is reflected to some degree by their enrollment in Williamson Act contracts none of which are subject to notices of nonrenewal. Some of the lands are subject to urbanization pressures from Fall River Mills and McArthur and rural subdivisions, but these pressures are presently limited both in geographic scope and intensity.

The current primary uses of these agricultural lands are field crops, strawberry nursery stock, and irrigated pasture. In comparison to agricultural lands located in the Sacramento River Valley, lands in the Fall and Pit River Valleys experience a shorter growing season and less precipitation. (7) These factors determine the productivity and economic return of these lands, which in turn impact on their ability to cover the costs of production. A production cost which is becoming increasingly significant in the Fall and Pit River Valleys is energy required for pumping irrigation water. Alternative irrigation management practices may be one solution to reducing these costs. A final factor is transportation of the agricultural products, since the Fall and Pit River Valleys are less accessible to the population centers than in the Sacramento Valley.

Characteristic to all areas of productive valley agriculture is the need to minimize the problems of non-compatibility between commercial agriculture and rural, suburban and urban residential uses. Intensive agricultural activities can cause dust, odors, noise, smoke and other results of typical agricultural operations and business which some may find objectionable to non-agricultural lifestyles. In order to protect agricultural activities from complaints from non-agricultural, residential users, the County should always carefully evaluate the compatibility of new development proposals which may act to hinder typical agricultural operations on agriculturally designated lands.

Foothills

The foothills located in the portion of Shasta County known as the Western Upland contain some of the best rangelands available in the County. Particularly noteworthy is the area known as the Bald Hills. Some small pockets of land classified as prime agricultural lands are located in the vicinities of Igo and Ono.

The primary use of these lands is livestock grazing. Grazing operations in this area enjoy good access to transportation associated with the Interstate 5 corridor and to the regionally important Shasta County Auction Yard located in Cottonwood. Almost all of the grazing lands in this area are subject to Williamson Act Contracts.

Development pressures on these lands have been less intense than in other areas of the County. But if this situation changed, development in this area would greatly increase the conflicts between ranching and residential land uses. Given their impact on grazing and the cattle industry, it is important to understand the nature of these conflicts.

Persons purchasing homes in agricultural areas generally desire the feeling of openness produced by their relatively larger homesites, the surrounding agricultural uses and the opportunity to engage in gardening and some animal raising, but not part-time farming. This type of rural residential development presents a number of problems impacting the adjacent lands used for grazing purposes. The discussion of these impacts which follows is also applicable to rural residential development located in all agricultural areas.

First and foremost, land used for residential purposes is usually unavailable for grazing purposes. Second, the unavoidable consequences of grazing and certain range management practices, such as controlled burning of brush, use of pesticides, tilling of land, noise and odors, and stray animals, adversely affect adjacent residents who in turn petition their elected officials to prohibit or restrict these activities. Third, adjacent residences adversely affect grazing operations by the destruction of fences, harassment and destruction of stock by trespassers and dogs, increased potential for wildfires, and greater demand for already limited water supplies. There are also other less visible but significant conflicts related to the impact of rural residential development on land prices. As land is developed or merely subdivided for residential purposes, land prices increase, making it more difficult for ranchers to buy or lease land to maintain or increase the size of their grazing operations. People wanting to enter the grazing industry find that this is not financially possible. Non-compatible recreational uses also provide many of the same conflicts to agricultural uses.

The foothills situated in the Eastern Upland region of Shasta County contain rangelands equal in quality to those located in the Western Uplands, but this area does not contain a large block of excellent rangeland such as the Bald Hills of Western Upland. Several creek valleys, including Little Cow, South Cow, Old Cow, and Clover Creeks, contain lands classified as prime agricultural lands and may be suitable as irrigated cropland or pasture.

The primary use of these lands is for the grazing of livestock. Grazing operations here, like those in the Western Upland, also enjoy good access to the Interstate 5 transportation corridor. Almost all of the grazing lands in this area are under Williamson Act contracts.

Development pressures in the Eastern Upland are significant. Conflicts between rural residential uses and grazing operations pose a significant threat to the economic viability of the latter. The future of grazing in the Eastern Upland will in part depend on policies adopted by the Plan with respect to future rural residential development in this area.

Range improvement burning has been practiced in Eastern Shasta County for a number of years both to improve grazing lands and reduce fire hazards. The Shasta County Vegetation Management and Demonstration Project (SCVMDP) has been designed to consolidate landowners and management practices into a coordinated resource management plan. Brush encroachment can be halted in the short run under this project by removal of brush through control burns and/or mechanical and chemical treatment. The benefits of vegetation management to range improvement has been well documented. The University of California Cooperative Extension has an ongoing research program begun in the 1930's in

Shasta County to demonstrate the value of brush reduction. Past projects have shown that livestock grazing can be increased three to four times over a six to ten-year period following an initial burn. Other benefits include improved wildlife habitat, increased water yield, reduced soil erosion, and control of the air pollution impacts of brush burning. Long-range control of brush will require that landowners use better management practices; i.e., proper grazing use, fencing, water development, seeding of grasses, soil erosion control and proper class of livestock. (8)

If the SCVMDP proves successful and is applied beyond the current 200,000 acre project area, the livestock carrying capacity of the Eastern Upland will be enhanced. This in turn will have major implications for the cattle industry and the larger economy of Shasta County. But range management practices, such as control burns, do conflict with rural residential uses. This opportunity to enhance the economic productivity of the Eastern Upland will likely be foreclosed in the absence of policies to promote effective range management practices.

Large Mountain Meadows

The County's largest mountain meadows, located above the 3,000 foot elevation in the northeast region of the County, include the Goose, Cayton, Burney Creek and Hat Creek Valleys. These meadows are irrigated and are used for grazing and growing crops. About half of these lands are under Williamson Act contracts. With the exception of the Hat Creek the Burney Creek Valleys, development pressures on these lands are minimal and likely to remain so. The Hat Creek Valley has been extensively subdivided, but future development of the lots created will depend on the availability of water and septic suitability. The Burney Creek Valley lies immediately to the north of the town of Burney and could be served by its water and sewer systems. The development potential of this area is limited by flooding problems.

6.1.6 Framework for Minimum Agricultural Parcel Sizes

This examination provides the basis for establishing ranges of minimum parcel sizes appropriate to the variety of conditions present in the County. These parcel sizes, which are presented in Table AG-7, provide a framework for plan policies designed to preserve agricultural lands in units capable of supporting agricultural operations. Table AG-7 presents minimum parcel sizes for both full and part-time operators.

In the case of the full-time operator, these minimum parcel sizes assume that it would be economically worthwhile to use a parcel for the primary use listed. Economically worthwhile means that the economic return on this property is attractive to a full-time operator if proper management and financing strategies are utilized. The concept of an economically worthwhile parcel size must be distinguished from the concept of a parcel capable of supporting a family. Under this latter concept, the minimum size of a parcel would in most cases exceed the minimum size under the concept of economically worthwhile. It follows that the full-time operator may require more than one parcel of an economically worthwhile size to support a family.

In the case of the part-time operator, it is assumed that a parcel of the size required would yield an economic return, but this return would not provide a self-sustaining annual family income. Typically, this will involve parcel sizes on agricultural soils ranging from 5 acres to less than 40 acres which are designated based on local land use patterns and need for buffers between residential and other resource uses.

The following definitions are provided as guidelines for use with Table AG-7:

"Cropland" is land capable of producing agricultural products which are planted, cultivated and harvested by either mechanical means or by hand, or both. Cropland types include field and row crops, orchards and vineyards, nursery crops and other related food and fiber crops.

"Irrigated pasture" is land used primarily for grazing and occasional haymaking, which is irrigated by surface or subsurface means according to generally accepted practices.

"Grazing land" is land used primarily for grazing and which relies exclusively on rain and snowfall for production of forage. Agriculturally fallow land is also considered grazing land if left fallow under the definition of "current primary uses."

"Current primary use" refers to the prevailing use on a majority of land or a parcel during three of the previous five years.

For example, the current primary use of a parcel would be irrigated pasture if it had been used as provided by definition during at least three of the previous five years.

TABLE AG-7

MINIMUM PARCEL SIZE REQUIREMENTS

Agricultural Area	Current Primary Use	Parcel Size Minimums[1] Full-Time Operators (Land Designated A-C or A-G)	Parcel Size Minimums[1] Part-Time Operators (Land Designated A-cg)
Valleys			
Sacramento River	Field Crops	40	5, 10 or 20
	Orchard Crops	40	5, 10 or 20
	Nursery Stock	40	5, 10 or 20
	Irrigated Pasture	120	5, 10 or 20
	Grazing	760	5, 10 or 20
Fall & Pit Rivers	Field Crops	40	5, 10 or 20
	Nursery Stock	40	5, 10 or 20
	Irrigated Pasture	160	5, 10 or 20
	Grazing	760	5, 10 or 20
Foothills			
Eastern Upland	Grazing	760	
	Irrigated Pasture	160	
Western Upland	Grazing	760	
	Irrigated Pasture	160	
Mountain Meadows			
Goose Valley	Irrigated Pasture	160	
Burney Creek Valley	Irrigated Pasture	160	
Cayton Valley	Irrigated Pasture	160	
Hat Creek Valley	Irrigated Pasture	160	

[1]In cases involving irregular sections the parcel size minimum may vary up to five percent but not more than that needed to adjust for the irregularity, whichever is less.

Source: This table was developed in cooperation with Shasta County Cattlemens' Association and the Shasta County Farm Bureau

6.1.7 Objectives

AG-1 Preservation of agricultural lands at a size capable of supporting full-time agricultural operations (designated on the land use maps as A-C or A-G) in order to allow the continuation of such uses and to provide opportunities for the future expansion and/or establishment of such uses.

AG-2 Preservation of agricultural lands at a size capable of supporting part-time or second income, but not full-time, agricultural operations (designated on the land use maps as Ac-g) in order to allow the continuation of such uses and to provide opportunities for the future expansion and/or establishment of such uses.

AG-3 Recognition by Shasta County residents that the preservation of agricultural lands for agricultural uses, both large and small scale, is in the public interest because it preserves local and regional food supplies and is an important contributing industry to the Shasta County economy.

AG-4 Recognition by Shasta County residents that preservation of agricultural lands, both large and small-scale, provides privately maintained open-space, facilitates a rural life-style, and requires community understanding of the problems facing ranchers and farmers.

AG-5 Protection of agricultural lands from development pressures and or uses which will adversely impact or hinder existing or future agricultural operations.

AG-6 Protection of water resources and supply systems used for agriculture.

6.1.8 Policies

AG-a Agricultural lands in Shasta County shall be classified according to three general categories based on the following criteria:

- Lands designated on the land use maps as A-G capable of supporting grazing by full-time operators, including:
  - Existing grazing lands used for this purpose.
  - Lands which are not now but could be used for this purpose based on resource characteristics (soils, climate, access to water) and compliance with the applicable parcel size minimums of Table AG-7.

- Land designated on the land use maps as A-C capable of supporting crop production by full-time operators, including:
  - Existing croplands used for this purpose.
  - Lands which are not now but could be used for this purpose based on resource characteristics (soils, climate, access to water) and compliance with the applicable parcel size minimums of Table AG-7.

- Land designated on the land use maps as Ac-g capable of supporting crop production by part-time or second income operators, with the following characteristics:

- Existing lands used for this purpose.
- Lands which are not now but could be used for this purpose based on resource characteristics (soils, climate, access to water).
- Applicable parcel size minimums of 5, 10 or 20 acres, as best suited to the locale, and applied to part-time agricultural areas found in Table AG-7.

AG-b Existing agricultural lands and other County lands meeting the criteria described in Table AG-7 shall be reviewed by the County at five year intervals to determine the appropriateness of either their current or potential classification as agricultural lands. The purpose of this review is to ensure that agricultural lands either currently or potentially preserved for agricultural uses merit such special treatment and to provide a systematic, uniform, and equitable process for the periodic review of certain current or potential agricultural lands. This review process shall be used judiciously. Removal of land from the agricultural designation shall occur only when evidence and findings are provided which shows an overriding public need to develop the property for non-agricultural uses.

This review shall be conducted by the County planning agency with the assistance of an agricultural advisory committee appointed by the Board of Supervisors.

Existing agricultural lands and other County lands may be nominated for review between five year General Plan updates as follows:

- By resolution of intention by the Board of Supervisors or Planning Commission;
- By action of the agricultural advisory committee;
- By completed application of the owner of such; and
- By recommendation of the County planning agency.

Each nomination for a land use or policy change shall be executed by a completed County application which includes special supplemental information required by the County specific to amendments for the Agricultural Lands Element.

In its review, the County planning agency and the advisory committee shall address the following factors, and any recommendations presented shall provide an analysis which explicitly states the relationship to these factors:

- The local, state, and national interests in the preservation of agricultural lands to assure adequate, healthful, and nutritious food supplies.

- The availability of non-agricultural lands to serve the purposes which would otherwise require the conversion of agricultural lands into non-agricultural lands.

- The impact of the conversion of agricultural lands into non-agricultural lands (e.g. adjacent agricultural lands).

- The impact of the conversion of non-agricultural lands into agricultural lands (e.g., adjacent non-agricultural lands)

- The relationship between the geographic pattern of agricultural land use and the pattern of community development prescribed in the General Plan.

AG-c Lands designated on the land use maps as A-C or A-G shall be principally used for grazing and crop production.

In addition to these principal uses, lands so classified may be used for residential purposes accessory to the principal use. Such accessory residential uses shall be limited to "family member" housing and farm labor housing. Separately created legal lots not exceeding five acres in size may be created for family member housing or for purposes of financing as long as it can be demonstrated that the division will not infringe upon the viability of the agricultural operation. The number of family member parcels that may be created shall be determined in the zoning ordinance. Farm labor housing which includes both seasonal and annual employees shall be permitted at the rate appropriate to the type of agricultural operation and shall not be located on separate legal lots created for this purpose.

Lands classified as agricultural lands may also be used for low-intensity commercial recreation uses. Such low-intensity uses shall not preclude the long-term availability to use such lands for agricultural production. As used in this context, low intensity commercial recreation uses are defined as uses which will not interfere with the principal uses of lands for agricultural purposes and do not require substantial improvements, including lodging facilities. Examples of low intensity recreation uses include hunting, fishing, horseback riding, hiking, non-motorized boating and other similar activities.

Lands classified as agricultural lands may be used for mineral exploration and extraction purposes that will not permanently interfere with the principal uses of the lands for agricultural purposes.

AG-d In order to protect full time agricultural uses from incompatible land uses, lands being divided in areas designated either RA or RB that adjoin lands designated for full-time agricultural uses, shall comply with one of the following:

- If outside of a rural community or town center, the minimum parcel size shall be ten (10) acres or more depending on other policies or standards. Residential building sites shall be located, to the extent feasible, to avoid negative impacts on the adjacent land uses.

- If within a rural community or town center, the minimum parcel size shall be five (5) acres or more depending on other policies or standards. Residential building sites shall be located, to the extent feasible, to avoid negative impacts on the adjacent land uses.

- If it can be shown that topographic or man-made features will sufficiently separate the uses, the above mentioned standards shall not be applied.

AG-e Divisions of agricultural lands (designated A-C or A-G) shall comply with the following criteria:

- Any proposed division of land designated on the land use map as full-time agricultural lands shall require documentation that the division is necessary for continued full-time agricultural uses, except land divisions for family residences or financing (Policy AG-c), and that the proposed parcel sizes will not be detrimental to the economic viability of agricultural operations on said parcels or adjoining or nearby parcels. Examples of land divisions which may be necessary to allow continuation of agricultural uses include, but are not are not limited to, land sales or trades between agricultural operations; or the transfer or settlement of estates.

- Any proposed division of lands shall be for exclusive agricultural purposes, except in the case of family member residences or financing, and may be approved only if all the following conditions are met:

  - The size of the parcel(s) created shall conform to Table AG-7 with respect to the geographic location of the agricultural lands, their current primary use, and scale of operation.
  - No conflicts with adjacent agricultural operations will result from the division.

AG-f All lands classified as full-time agricultural lands shall be placed in a corresponding agricultural zone district and shall be eligible to enter into a contract, as provided by the Williamson Act (also known as the California Land Conservation Act of 1965) and applicable Shasta County agricultural preserve standards which require a minimum of 100 acres of Class 1 equivalent soil based on the Soil Conservation Service's soil capability system.

AG-g Lands designated Ac-g shall be maintained to support both short and long-term part-time agricultural activities as the primary land use while allowing subordinate auxiliary uses, including single family residences. Removal of agricultural soils and other activities which reduce the potential for agricultural production as the primary land use are prohibited, except in the following situation:

Mineral extraction or mining on lands in the vicinity of a significant waterway where the County has adopted a stream corridor delineation upon consultation with the Department of Fish and Game and subject to all of the following general performance standards:

- The land shall be located within the adopted delineated stream corridor.
- The end result of the land use change is to enhance fish and wildlife habitat within the delineated stream corridor.
- The perceived natural resource and environmental value and public interest must be equal to or greater than that of maintaining the site as part-time agricultural land.
- The land use conversions result in habitat protection zoning.
- A long term and comprehensive aggregate and wildlife habitat management and protection program for the waterway reach affected by the proposed land use change has been adopted by the County, after consultation with the Department of Fish and Game.
- Protection of bridges and other key infrastructure which may be impacted by mining operations is assured through proper engineering and hydrologic design.

Mining applications received prior to May 1994 may be approved prior to the adoption of a comprehensive management plan to affected waterway if supportable findings are made that the proposal has substantially complied with other performance standards contained in this policy. (Approved May 9, 1995, GPA 1-95, Resolution 95-90.)

AG-h The site planning, design, and construction of on-site and off-site improvements for non-agricultural development in agricultural areas shall avoid unmitigateable short and long term adverse impacts on facilities, such as irrigation ditches, used to supply water to agricultural operations.

Footnotes:

1. 1987 Census of Agriculture
2. 1989 Agricultural Crop Report, Shasta County Agricultural Commissioner
3. Ibid
4. Total Shasta County acreage under Williamson Act contracts in FY 1978-1979 was 148,210 acres. Source: State Board of Equalization.
5. OECD Agricultural Policy Reports, "Part-time Farming in OECD Countries," General Report, Paris, 1978.
6. Agricultural Study of the Churn Creek Bottom Area, University of California Cooperative Extension, 1975.
7. Climate of Shasta County, U. C. Extension, August 1965.
8. The discussion is taken from California Department of Forestry, Shasta County Vegetation Management and Demonstration Project Report, pages 3-6.

6.2 TIMBERLANDS

6.2.1 Introduction

The Shasta County Timberlands Element is a combination of planning requirements from the mandated Land Use, Conservation, and Open Space Elements. Portions of these mandatory elements relevant to timberlands are cited below.

> A land use element which designates the proposed general distribution and general location and extent of the use of land for. . . natural resources. . . . The diagram for the land use element shall designate those parcels of real property for timberland production which have been so zoned pursuant to the California Timberland Productivity Act of 1982, Chapter 6.7 (commencing with Section 51100) of Part 1 of Division 1 of Title 5 (Government Code Section 65302(a).)
>
> A conservation element for the conservation, development and utilization of natural resources including. . . forests. . . the conservation element may also cover. . . protection of watersheds. . . . (Government Code Section 64302(d).)
>
> Open space for the managed production of resources, including. . . forest lands. . . . (Government Code Section 65560(b)(2).)
>
> Parcels zoned as timberland preserve shall be zoned so as to restrict their use to growing and harvesting and to compatible uses and shall be entered as a timber preserve element of the County General Plan. (Government Code Section 51115.)

Forest management is the application of business methods and forestry principles to the operation of a forest property for the purpose of maintaining forest resources and producing a continuous supply of forest products. Forest management is based on sound silviculture practices. Silviculture is the theory and practice of controlling the establishment, composition and growth of forests. The State Forest Practice Rules defines a "silvicultural system" as a planned program of forest stand treatments during the life of a stand. It consists of a number of integrated steps conducted in logical sequence leading to or maintaining a forest of distinctive forms for the level of management intensity desired, which includes but are not limited to site preparation, planting, harvesting, road construction, insect and disease control, inventory and fire protection.

Land dedicated to commercial forest management provides not only building materials, energy for industrial processes, firewood, County revenue for roads and schools, and employment opportunities, but also wildlife habitat, recreational opportunities, aesthetic enjoyment, and watershed. Maintaining timber operations and preservation of valuable timberlands are important to the economic base and the natural resource values of Shasta County. The Timber Element, therefore, relates present and future uses of timberlands to the natural resource, economic and community development plans for Shasta County.

6.2.2 Findings

One of Shasta County's most valuable resources is its timberland. Of the County's 2,428,000 total acres, 50.3% or 1,223,000 acres are dedicated to commercial forest uses. (1)(2) As of April, 1991, 609,365 acres of non-federally owned timberland were designated in timber preserve zones (TPZs) pursuant California's Forest Taxation Reform Act of 1976. These timber preserve lands represent nearly half of all County timberlands and 77.5% of privately owned timberlands. A breakdown of commercial forest land by ownership class is presented in Table T-1. As the table indicates, private timberland holdings are nearly twice those of public agencies, with forest industry and miscellaneous private corporations controlling over 50% of the total commercial timberland in the County. Smaller private operations (farmer-owned and noncorporate holdings) constitute only 13.3% of the total timberland of the County, yet nearly 21% of the total private holdings.

Under the Forest Taxation Reform Act, non-federal timber producing lands can be classified by the County's zoning ordinance as timber preserve zones (TPZs) through a process involving the Assessor, Planning Commission and timber owners. Such lands may be used for growing of forest products and compatible uses only, and property taxes for these lands are based on these limited uses. Forest lands outside of TPZ zones may also be assessed for their aesthetic or amenity value. When timberlands are harvested, a special yield tax is to be paid to the State for all forest products regardless of zone. Most of this tax revenue is returned to the county of origin. Table T-2 shows the breakdown of acres and leading ownership of timberlands within TPZs in Shasta County.

TABLE T-1

COMMERCIAL FOREST LANDS IN SHASTA COUNTY BY OWNERSHIP CLASS

Ownership Class*		Acres	Percent of Total
1.	National Forest	374,000	30.5
2.	Other Public	67,000	5.5
	Total Public	441,000	36.0
3.	Private Forest Industry	231,000	18.9
4.	Private Farmer-Owner	94,000	7.7
5.	Misc. Private-Corporate	389,000	31.8
6.	Misc. Private-Non Corporate	68,000	5.6
	Total Private	782,000	64.0
7.	TOTAL - ALL OWNERSHIPS	1,223,000	100.0

* Key to ownership classes

1. National Forest commercial timber acreage represents approximately 50% of USFS lands in Shasta County, based on review of area Forest Plans. There are 749,000 USFS acres in the County, including 469,000 acres on the Shasta NF, 31,000 acres on the Trinity NF, and 249,000 acres on the Lassen NF.

2. "Other Public" lands include lands administered by the Bureau of Land Management (BLM); the Bureau of Indian Affairs; miscellaneous federal agencies; lands owned by states, counties, and local public agencies, and lands leased by governmental units for more than 50 years.

3. "Private Forest Industry" lands are owned by companies or individuals operating wood-using plants.

4. "Farmer-Owned" lands are those owned by operators of farms.

5. "Miscellaneous Private Non-Corporate" lands are privately owned lands other than forest industry, farmer-owned, or corporate lands.

Source: Cooperative Extension Forestry, University of California, 1979 Forestry Facts - Shasta County.

Table T-2

LEADING OWNERSHIP IN TIMBER PRESERVE ZONES
IN SHASTA COUNTY
April 1991

Landowner	Acres in TPZ
Sierra Pacific Industries	171,138
Roseburg Resources Co.	115,337
Fruit Growers Supply	81,204
Noca Timber Co.	46,968
Brooks Walker	43,721
Hearst Corporation	39,733
Champion Intern'l. Corp.	19,513
Walter Walker	16,153
Crane Mills Corporation	16,005
Diamond Lands Corp.	12,299
Other TPZ lands	47,294
Total TPZ lands	609,365

Source: Shasta County Assessor, April 1991

The timber industry is important to the economy of the State as well as the County itself. Table T-3 shows Shasta County's relative statewide importance as a timber producing county in California. In 1988, the County was the fifth ranking timber county producing a harvest amounting to 267 million board feet (MBF) and valued at $40.2 million for timber cut from both private and public lands. Revenue to the County from timber harvested on federal forest lands amounted to over 1.7 million in 1988. In 1979, the timber harvest from Shasta County was 248 million board feet valued at over $43 million. At the local level, the 1979 harvest provided approximately $1.3 million in federal timber revenues.

The County's relative position as a timber producer has been consistent with overall statewide trends through the 1980's. Overall, timber harvest volumes increased significantly during the decade while value declined. Table T-3 shows that the top 15 timber producing counties had a 19% increase in the volume of timber harvested between 1979 and 1988, while at the same time, value declined by 11%. This trend has continued until recently as 1991, when new timber management and environmental concerns have begun to affect state and federal timber harvest policies.

TABLE T-3

SUMMARY OF CALIFORNIA TIMBER HARVEST
1979, 1988 and 1991
(1979 data in parenthesis)

	County ... 1988 Ranking by Volume	1988 Volume Million Board Feet		Percent of State Total	1988 Value in Millions		Percent of State Total	1991 Volume	1991 Value
1.	Humboldt	741.3	(463.3)	16.1 (11.8)	139.7	(129.2)	20.9 (17.4)	459.2	141.6
2.	Siskiyou	583.3	(510.2)	12.6	74.4	(76.6)	11.1 (10.3)	263.0	47.2
3.	Mendocino	470.8	(329.9)	10.2 (8.4)	58.6	(83.7)	8.8 (11.3)	275.0	66.9
4.	Trinity	319.4	(240.8)	6.9 (6.2)	43.3	(43.5)	6.5 (5.9)	193.7	44.5
5.	**Shasta**	**267.1**	**(248.3)**	**5.8 (6.3)**	**40.2**	**(43.1)**	**6.0 (5.8)**	**196.6**	**35.8**
6.	El Dorado	217.3	(151.6)	4.7 (3.9)	22.4	(17.0)	3.3 (2.3)	191.6	30.1
7.	Plumas	215.0	(280.1)	4.7 (7.2)	36.2	(46.0)	5.4 (6.2)	281.6	51.9
8.	Sierra	205.1	(135.2)	4.4 (3.5)	19.9	(22.2)	3.0 (3.0)	48.7	6.8
9.	Del Norte	192.3	(294.8)	4.2 (7.5)	42.5	(97.1)	6.4 (13.1)	122.9	43.7
10.	Tehama	159.8	(139.3)	3.5 (3.6)	27.3	(25.8)	4.1 (3.5)	146.2	30.8
11.	Butte	146.4	(86.0)	3.2 (2.2)	23.1	(12.8	3.5 (1.7)	75.9	13.9
12.	Tuolumne	134.6	(136.4)	2.9 (3.5)	12.6	16.9)	1.9 (2.3)	133.0	20.4
13.	Lassen	124.4	(99.5)	2.7 (2.5)	25.5	(14.7)	3.8 (2.0)	113.5	24.1
14.	Placer	120.2	(134.7)	2.6 (2.0)	17.9	(22.1)	2.7 (3.0)	124.1	23.5
15.	Calaveras	99.3	(no 1979 rank)	2.0	11.8		1.8	94.8	13.9
	Totals	3996.3	(3351.1)	86.5 (85.6)	595.5	(668.7)	89.0 (90.0)	2719.8	595.1

Notes:

1. Table derived from 1979 and 1988 Summary of California Timber Harvest, State Board of Equalization.
2. Board feet is the quantity cut and scaled - figures are in millions of board feet.
3. Value of timber is determined immediately before cutting - figures are in millions of dollars at time of cutting.
4. Top county 1991 volume was 85.7% and value was 89.9% of statewide total.

The timber industry has historically been a large contributor to Shasta County's employment base. As an example, 1978 statistics show that approximately eight percent of the County's work force were employed by the lumber and wood products industry, but this figure did not accurately represent the total economic contribution of the County's timber resources. Accounting for the "multiplier effects" of dollars generated by the timber industry, was estimated to directly or indirectly be responsible for more than 40% of the County's basic employment, while wood products alone contributed 61% to the County's manufacturing employment base. (3)(4) In 1972 the wood products industry accounted for nearly 70% of the County's manufacturing employment and nearly 13% of its total work force. (5)

However, since that time, the nature of Shasta County's economy has undergone significant structural changes and the timber industry, although still important, does not command the share of Shasta County's economy that it once did. In 1990, wood products had dropped to 46% of total manufacturing employment and only represented 4.5% of total County employment. The number of wood products jobs was 26% less than in 1972. (6)

However, the strength and importance of Shasta County's timber industry is expected to continue throughout and beyond the twenty (20) year planning period. Over the long term, nationwide demands for timber products are expected to rise faster than available supplies, and higher prices for such products can also be expected over the next 50 years. (4) Higher prices have positive implications for the County as they tend to promote more intensive forest management practices and improved diversification and wider utilization of wood products.

Nationwide trends in the timber industry have been somewhat redefined during the 1980's and include the following factors:

- Increased mechanization efficiency and labor-reducing mill technologies have resulted in increased production and volume while reducing labor needs.

- In certain areas, the harvesting of timber at rates which exceed the sustainable reproductive rate of the forest have caused concern for long-term supplies. (7)

- New environmental concerns are affecting timber harvests.

- Increased recycling of paper and wood products is expected to help reduce demand for timber, and help balance timber reproduction at sustainable rates. (8)

- The movement of the timber industry towards the Southeastern states as a combination of the above trends increase in the Western states.

From a land use planning perspective, the timberland supply is impacted due to the conversion of timberland to other land uses which are incompatible with timber operations and management. Such uses are most often associated with

rural residential uses which limit efficient timber management. In addition, these land use activities and patterns can create situations where management for wildland fires is much more difficult, both for adjacent timberlands and within such forested rural residential areas. Additional loss of timber resources is attributable to parcelization into lot sizes inefficient for economic timber production.

Negative impacts from forest practices may affect surrounding land uses and resources and create special management problems for timberland operations. Harvesting practices and the associated noise, dust, and traffic can be potentially damaging to air and water resources, wildlife habitats, aesthetic enjoyment, and the health and safety of nearby residences, although state required timber harvest plans are intended to mitigated timber harvesting impacts to acceptable levels.. These problems are can be magnified if incompatible land uses locate too close to one another. It is thus in the best interest of all that provisions be made in the General Plan to avoid land use conflicts whenever and wherever possible.

Private timberland owners range from large corporate land owners to operators of small woodlots and Christmas tree farms. While the land use objectives for large-scale timber operators are fairly evident, opportunities and incentives for smaller operators to optimize yields from their lands are less. For the small timberland owner, economic barriers to increased timber production and a limited knowledge of existing timber management opportunities have been recognized as impediments to increasing timber supplies. Greater growth potential may be realized, however, with public education through cost-sharing and/or technical assistance programs.

6.2.3 Objectives

T-1 Preservation of timberlands suitable for forest management and production, in order to allow for either the continuation of such uses or to provide opportunities for the future establishment of such uses.

T-2 Protection of timberlands from adjacent land uses which adversely impact forest management activities.

6.2.4 Policies

T-a Preservation of timberland shall be achieved by the use of the Timberlands use category. This category shall be applied to lands as follows:

- Lands now within a Timber Production Zone (TPZ) in accordance with the Forest Taxation Reform Act (hereinafter Act).

- Lands which may be eligible to enter into a TPZ in accordance with the Act.

- Lands not contained within either of the above categories which are suitable for timber production as shown on the adopted land use maps.

- Timber producing lands which are disposed by sale or trade to a private landowner by a federal or state agency.

T-b Timberlands within a TPZ shall be regulated as to use and subdivision as set forth in the Act. In addition to the permitted uses listed in the Act, other related and compatible uses may be conditionally permitted under applicable provisions of the zoning plan.

T-c Timberlands submitted for entrance into a TPZ in accordance with the Act and the land area concerned shall be comprised of single or contiguous parcels whose resource value(s) and size(s) comply with Table T-4.

T-d Timberlands not within a TPZ shall be subject to the County development standards and to the following requirements as to their use, and density of development.

Use

The primary use of these lands shall be for forest management and production. Secondary uses of these lands include uses which do not impede forest management or the processing or utilization of timber. Such uses include limited residential and recreational uses, mineral exploration and extraction and processing where the surface area will be reclaimed, permanent wood and woodwaste processing installations including power generation facilities, and small hydropower facilities.

Density

Timberland may be developed at the maximum residential density of one dwelling per 40 acres except, when 75 per cent or more of the portion of the parcel proposed to be developed is in a Dunning Site Classification of IV or V and is within one mile driving distance on a legal easement of a County paved road, the parcel may be developed at the maximum residential density of one dwelling per 10 acres. Pre-existing legal parcels that are smaller than provided above may develop at a density of one dwelling per parcel, subject to County Development Standards. For proposed land divisions involving irregular survey sections the density may vary up to five percent but not more than that needed to adjust for the irregularity, whichever is less.

Clustering

Developments on lands subject to a maximum density of 1 dwelling unit/40 acres may receive a 100 percent density bonus if the residences are clustered on parcels not larger than 2 acres per residence to minimize conflicts with adjacent timber management activities on the remainder of the property.

T-e In order to protect timberland uses from incompatible land uses, lands being divided in areas designated either RA or RB and that adjoin lands designated for full-time timberland uses, shall comply with one of the following:

- If outside a rural community or town center, the minimum parcel size shall be ten (10) acres or more depending on other policies and standards. Residential building site shall be located, to the extent feasible to avoid negative impacts on the adjacent land uses.

- If within a rural community or town center, the minimum parcel size shall be five (5) acres or more depending on other policies and standards. Residential building site shall be located, to the extent feasible to avoid negative impacts on the adjacent land uses.

- If it can be shown the topographic or man-made features will sufficiently separate the uses, the above mentioned standards shall not be applied.

T-f The County should encourage and promote the utilization of wood waste produced in the County.

T-g The County should encourage and promote biomass thinning programs in timbered areas with extensive rural residential development for purposes of improving both tree vigor and wildland fire safety.

Footnotes:

1. Cooperative Extension - Forestry. University of California, 1979 Forestry Facts (for) Shasta County.

2. Commercial timberland is defined as land capable of growing commercial tree species at a rate of 15 cubic feet per acre per year.

3. McKillop, William, and Kent Connaughton; "Economic Importance of Forest Industries in Northern California." California Agriculture, May 1979.

4. Salvador, Jean, Research Analyst, California Employment Development Department.

5. "Annual Planning Information - Redding Area - 1991," California Employment Development Department.

6. Ibid

7. California Board of Forestry, staff report and documentation associated with promulgation of emergency rules, Nov., 1991

8. "Recycling will reduce demand for timber, Forest Service says," Sacramento Bee, 12/5/91.

TABLE 4

TIMBER SITE CLASSIFICATION AND PARCEL SIZE REQUIREMENTS

Resource Value		County Minimum Parcel Size
Dunning's Site Classification	Tree Height 100 year old Site Index	Acres
I	114 feet, or more	40
II	93 - 113 feet	60
III	75 - 92 feet	80
IV or V	Less than 75 feet	80

Notes: Timberland is rated for productivity based upon its ability to produce wood growth for trees. Five general site classes are established wherein Site I denotes areas of highest productivity, Site II and III denote areas of intermediate productivity, and Site IV and Site V denote areas of lowest productivity. The five site quality classes are set forth within each of three general forest types; redwood, Douglas fir and mixed conifers.

Table T-3 utilizes the mixed conifer class for Shasta County. Site index is based on average height of dominant trees at age 100 years. The Dunning system also includes 300 year age indexing for old growth stands.

Source: State Forest Practice Regulations, Article 4, Timber Site Classification Table. Also reference Revenue and Taxation Code Section 4341.

6.3 MINERALS

6.3.1 Introduction

This element establishes policies guiding the use and development of mineral resources in Shasta County. It addresses the mineral-related subjects required by the state mandated Conservation and Open-Space Elements, Government Code Sections 65302(d) and 65560, respectively.

> "A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources ... the Conservation Element may also cover ... the location, quantity and quality of the rock, sand and gravel resources." (Government Code Section 65302(d).

The Government Code further requires an open-space element for those open-space lands "used for the managed production of resources including, but not limited to, forest lands, rangelands, agricultural lands ... and areas containing major mineral deposits, including those in short supply." (Government Code Section 65560.) Through the provision of building materials, revenue, and employment opportunities, mineral resources contribute significantly to the economic and resource bases of Shasta County. The Mineral Element is a fundamental component of the Natural Resources Group.

Another important reason for developing a Minerals Element is to comply with the requirements of the California Surface Mining and Reclamation Act (SMARA) of 1975. The basic objectives of SMARA are to: (1) ensure the proper reclamation of lands disturbed by surface mining; and (2) safeguard access to mineral resources of regional and statewide significance in the face of competing and incompatible land uses. The Mineral Element is developed in a form that meets the County's land use planning needs while still being consistent with the objectives of SMARA.

Findings

6.3.2 Description of Resources

Shasta County is rich in mineral resources because it is situated at the "intersection" of five geologic provinces: (1) the Coast Range; (2) the Klamath Mountains; (3) the Sierra Nevada; (4) the Cascades; and (5) the Great Valley. Mining has played a significant role in the history and development of Shasta County. The 24 years between 1896 and 1920 were boom times for mining and established Shasta as the leading mining county in California. By the mid-1920s mining activities diminished due to serious pollution problems and national economic changes. In 1978, metal mining occurred only at the Washington Mine (lode gold) in the French Gulch planning area.

Along with copper and gold, the County's most significant mineral resources, 28 other mineral commodities have been mined commercially or occur in

potentially economic quantities. Most of the metallic ores lie in western Shasta County, the French Gulch district being the most important gold producing area of the region. The West and East Shasta Copper-Zinc belts contain the County's principal copper deposits. These belts extend from Iron Mountain northeastward to Backbone Creek, then east to Ingot, a distance of about 30 miles. In the past, mines in these belts have provided approximately 54% of the copper produced in California. This area also contains pyrite, iron and cadmium. Iron, molybdenum, chromite, borite and olivine may also be found in the northwest portions of Shasta County.

Between 1874 and 1929, local coal reserves were also in demand as an energy source for the County. By 1929, however, due to the extensive development of natural gas resources, coal usage had virtually ceased. However, present economic trends, global energy shortages, and a commitment to reduce dependency on imported oil could reactivate local interests in coal extraction in the long term.

The majority of coal deposits are located in the Montgomery Creek Formation east of the City of Redding. The Montgomery Creek coal field has been estimated to be approximately 45 miles square and to contain 1,500 tons of coal per acre foot, making a total of over 12 million tons of coal potentially available in the Montgomery Creek Formation. (1)

Other commercial mineral deposits in Shasta County include diatomite, limestone, volcanic cinders and pumice, sand, gravel, and stone. Diatomite is found in considerable quantities near the confluence of Hat Creek and the Pit River (North East Shasta County). Limestone occurs in four belts within the County. The western belt consists of scattered outcroppings west of Shasta Lake. The second and largest belt is located in the vicinity of Gray Rocks, in the northernmost section of the SCR planning area. A third consists of lands east of Ingot, extending approximately to the north fork of Squaw Creek, and the last belt is an isolated exposure along Route 299E. The Genstar Company quarry in the Gray Rocks belt is the only currently active limestone quarry, although all four belts have been mined during early parts of the century. Pumice and cinders have been mined from at least 13 intermittently active cinder pits in eastern Shasta County, and because of the importance of these materials in road building as well as other development, demands for these resources can be expected to continue. This is also true for sand and gravel deposits which occur along streambeds, floodplains, and river terraces throughout the County. Currently, sand and gravel are two of Shasta County's principal mineral products. Because of the importance of sand and gravel to the area's building and construction activities, and the inherent resource conflicts of mining along streams and adjacent to agricultural lands, there is a need to better understand cumulative impacts and resource planning alternatives associated with this form of mineral production. Therefore, policies of the Mineral Element call for the preparation of comprehensive program for the long term management of the County's aggregate resources.

Portions of Shasta County are underlain by sedimentary rocks that are known to produce valuable, scientifically significant, vertebrate and invertebrate fossils. Vertebrate and certain invertebrate fossils are recognized as significant,

nonrenewable paleontologic resources and are protected under federal, state and local environmental laws. Earth-moving activities related to development has the potential for producing significant adverse impacts on nonrenewable paleontologic resources that may be entombed in the sedimentary rocks being graded. Figure M-1 shows the location of paleontologically sensitive areas in the County. Portions of western and north central Shasta County have been rated as highly sensitive. (2)

6.3.3 Mineral Extraction Issues

Although mineral resource development is in many ways beneficial to Shasta County, mining operations often contribute to noise, air and/or water pollution problems, impose hazards to the public health and safety, destroy wildlife habitat areas, and degrade scenic resources. It is thus necessary that Minerals Element policies address the need to: (1) protect mineral resources from preemption by incompatible land uses in order to preserve future resource utilization and management options; and (2) protect adjacent resources and land uses from the negative impacts of extractive operations.

6.3.4 Role of State Government

In 1975, the California legislature enacted the Surface Mining and Reclamation Act to ensure the prevention or mitigation of the adverse environmental effects of mining, the reclamation of mined lands, and the production and conservation of mineral resources consistent with recreation and watershed, wildlife and rangeland objectives. Under the Act and the Board's regulations, the State Geologist must classify mineral areas of the state threatened by incompatible land uses that would preclude mining as one of four Mineral Resource Zones (MRZ) or a Scientific Resource Zone (SZ) as shown in Table M- 1.

The purpose of the classification and designation process is to insure that mineral deposits are available when needed. Counties and cities containing areas classified as Mineral Resource Zone 2 (MRZ-2) or designated as mineral deposits of regional or statewide significance must amend their general plans to include the state information on the mineral deposits and policies for managing them. The Act outlines the procedures by which the State Geologist classifies areas containing minerals, the Board of Mining and Geology designates deposits, and local governments must amend their general plans (Public Resources Code Section 1720 et seq.).

The State Board's classification of mineral lands statewide will take several years, yet it has established priorities to ensure that mineral lands most likely to be converted to uses incompatible with mining are classified first. No classification has been completed in Shasta County. Prior to state designation, local governments may begin their own classification procedures, and these efforts should be coordinated with the State Board and the State Geologist.

6.3.5 Role of Local Government

The role of local government relative to mineral resources is complicated by factors distinguishing the extraction of these resources from other land uses.

Much more than other land uses, mineral extraction is extremely site-specific; it can only occur where the resource exists. Given its resource dependence, this land use must end once the resource is exhausted, leaving the problem of appropriate future uses of the former extraction site.

Shasta County contains several areas that potentially meet the requirements of the MRZ-2 classification, as shown in Table M-1. In addition, there are many other areas of the County which contain significant mineral resources which are not threatened by incompatible land uses. The geographic size of these areas varies considerably. In some instances these areas are quite large in other cases these areas are relatively small. Given these differences in size as they relate to General Plan maps, the mineral resources of Shasta County are best addressed at different levels of detail.

At one level, the mineral resources land use designation is used on General Plan maps to identify relatively large areas or districts which are or potentially could be used for mineral extraction operations. Typically these areas, in whole or in part, are under the ownership or control of firms engaged in such operations. Since these areas are mapped, it is possible to develop land use patterns in adjacent areas which are compatible with mineral extraction.

TABLE M-1

MINERAL RESOURCES CLASSIFICATION

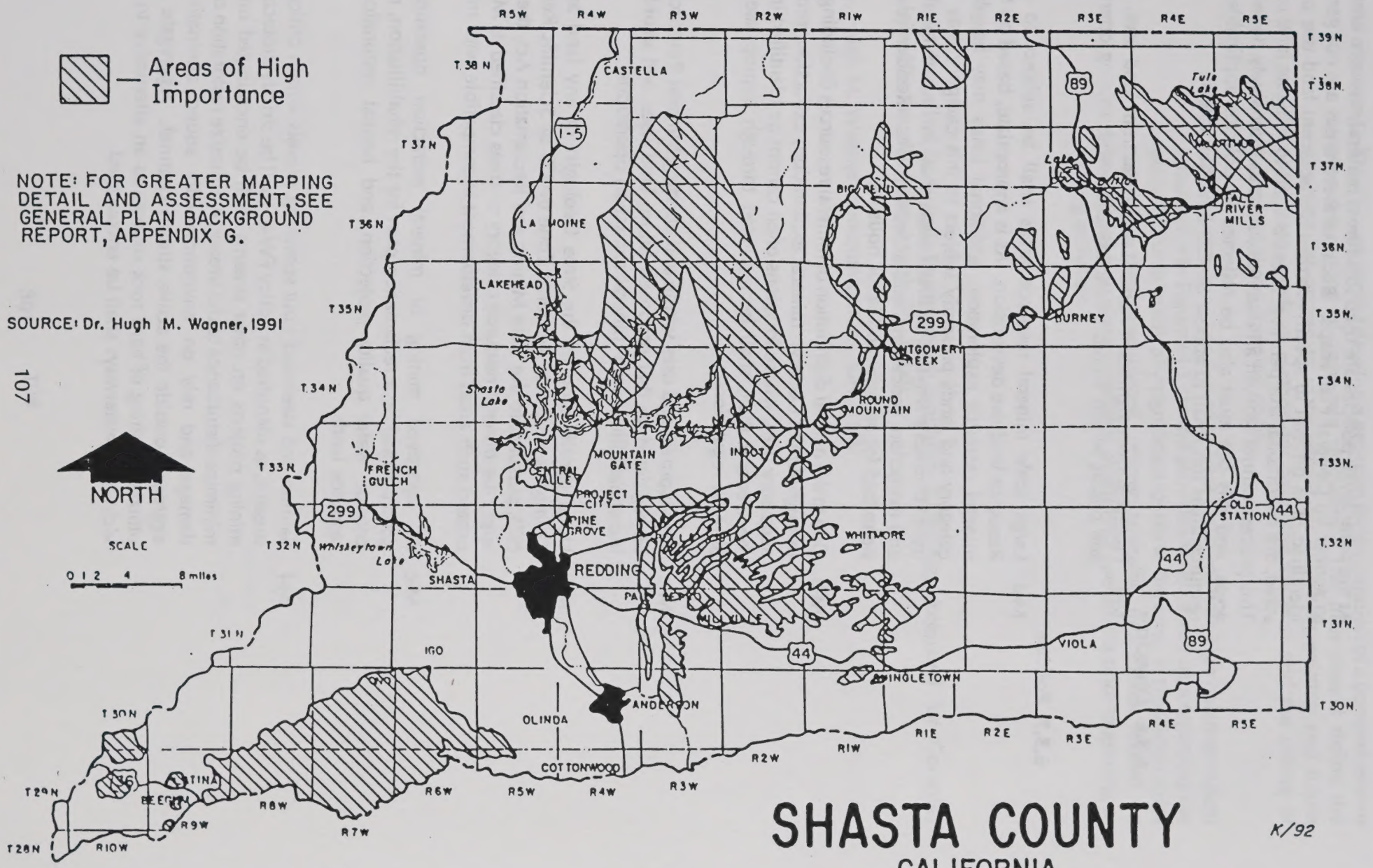
MRZ-l:	Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
MRZ-2:	Areas where adequate information indicates that significant[1] mineral deposits are present or where it is judged that a high likelihood for their presence exists.
MRZ-3:	Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
MRZ-4:	Areas where available information is inadequate for assignment to any other MRZ zone.
SZ:	Areas containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance.

Source: Guidelines, Title 14, California Administrative Code, Chapter 8, subchapter 1, Article II, Section 1(2).

[1] An area which contains an ongoing mine, or has a strong prospect of mineral resources and the test data has been evaluated by the State Geologist.

FIGURE—M-1

PALEONTOLOGICAL RESOURCES



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At the other level, policies are used to address mineral resource areas too small to appear on General Plan maps. Because these areas are not geographically identified, it is difficult to specify compatible adjacent land use patterns. Instead, the conditional use permit process is used to mitigate land use conflicts. This process cannot work in all instances, such as intensively developed urban areas, and this fact must also be reflected in policies applicable to mineral resource areas too small to appear on General Plan maps.

6.3.6 Objective

M-1 Protect known significant mineral resources from land uses, both on-site and offsite, which would be incompatible with mining operations.

6.3.7 Policies

M-a Large scale mineral resource areas shall be subject to the Mineral Resource land use designation. As is appropriate, based on the results of mineral resource exploration, additional lands may be placed in this category and lands presently subject to this category may be removed from it. Uses permitted in these areas shall include mineral exploration and extraction, processing, and accessory uses. Residential uses may be permitted for security and labor housing.

M-b Due to the natural distribution of mineral resources (including geothermal) throughout the County, mineral exploration, extraction, processing, and accessory uses, whose locations often cannot be identified in advance by the General Plan, shall be regulated through appropriate zoning and SMARA regulations.

M-c Development and uses within and abutting Mineral Resource lands shall be regulated so that proposed future land uses will avoid or mitigate, incompatibilities with mineral extraction operations.

M-d Upon classification by the State Geologist of any land area in Shasta County as a Mineral Resource Zone (MRZ) or Scientific Resource Zones (SZ), pursuant to the State Mining and Reclamation Act, the County shall apply the mineral resource category to areas classified as MRZ-2 or SZ to protect such areas from development incompatible with mining.

M-e All approved mining or mineral extraction operations shall be accompanied by a reclamation plan for the rehabilitation, reuse, erosion control, water quality protection, and habitat restoration of mineral resource lands.

M-f Salmon and steelhead trout spawning gravels within critically important streams, as identified in policy FW-e, shall be strictly protected. Aggregate mining projects on other streams shall be encouraged only when they minimize disturbance to the stream, emphasize restoration of any previous damage and rely on environmentally sound alternative sources of aggregate outside the active stream channel. Aggregate mining which utilizes crushing of hard rock sources as an alternative to mining in the vicinity of waterways shall be encouraged.

M-g The County should develop a program for preparation of a comprehensive plan for mining of aggregate resources. The plan should define the direction for aggregate management by analyzing existing and future production needs, a method for financing the plan and the setting of related resource planning goals.

M-h Grading or mining conducted in areas classified with high paleontological importance in Figure M-1 should provide literature and data regarding the potential for scientifically significant fossils in the area. If significant fossil specimens are encountered, proper scientific procedures should be implemented to allow collection or study of specimens prior to grading or mining activities.

Footnotes:

1. Leeds, Dennison K., Coal Prospects of Northern California, (prepared for Cooksley Geophysics Inc., Redding, March 26, 1980)

2. Dr. Hugh M. Wagner, communications, July, 1991

ENERGY

INTRODUCTION

Until the Reagan presidential administration, much of the energy conservation focus had concentrated on state and national policies and programs. At this time, however, local governments are the public bodies which will be most effective in directing energy uses in the years ahead. To a large extent, our national energy situation is no more than an accumulation of local energy trends throughout the entire nation.

The optional energy element is included in the Shasta County General Plan in recognition of this fact. Energy use is an integral part of daily life and has been included as a separate element in order to draw attention to its importance in the planning process.

The energy element establishes guidelines for the managed use and conservation of imported energy supplies and discusses the potential for development of locally available alternative energy resources.

FINDINGS

Energy Use Pattern

There are two general types of energy use: operational and embodied. Embodies energy is the energy bound into materials and goods during the manufacturing and construction process. For example, the energy embodies in a house includes the energy used to harvest, mill, and transport the lumber; to produce and transport masonry; and to transport workers to and from the building site. Operational energy is the energy consumed in the day-to-day heating, cooling, and lighting of buildings and the movement of people and goods.

Energy consumed at the point of end use is referred to as delivered energy. In analyzing the energy use pattern of a community or region, it is useful to categorize delivered energy by sector, such as residential, commercial, transportation, etc. The estimated 1980 delivered use by sector in the unincorporated area of Shasta County is shown in Figure E-1. With the exception of the residential and government sectors, each sector represents some combination of operational and embodied energy consumption. This energy use pattern is relatively typical of most communities in that the transportation sector accounts for over 50% of the total energy consumption. In unincorporated Shasta County, the slightly higher percentage consumed by this sector is explained by the rural nature of the area and the consequently longer travel distances from home to work, home to service centers, etc. After the transportation sector, the manufacturing and residential sectors account for an estimated 22% and 14% respectively of total delivered energy use.

Energy Supply

The supply side of the energy pattern of Shasta County is shown in Figure E-2 which estimates 1980 delivered energy consumption by fuel type. With the exception of a portion of the electricity, these fuel types represent energy derived from sources whose supply is limited and will eventually be depleted. These energy sources are called nonrenewables and are distinguished from renewable energy sources whose supply is unlimited or can be replenished. Solar and wind energy are clearly renewable energy sources. If managed properly, hydroelectric power, wood, and geothermal energy can also be considered renewable energy sources.

6.4 ENERGY

6.4.1 Introduction

Since the end of World War II, our society has come to rely on large amounts of energy to fuel its transportation systems, factories, industries, offices, stores, homes, agricultural and recreational activities. (1) Nearly every aspect of our lives is now directly or indirectly influenced by the availability of relatively low cost energy resources. The influence of energy supply and its cost is evident in activities that range from the way we design our towns and cities to personal consumer choices based on time and convenience. How energy is used has both a direct and indirect relationship with planning for air quality, circulation patterns and land use density. Wasteful energy use and excessive reliance on conventional energy sources, particularly that portion which drives up oil imports, will cost money, degrade the environment, increase risks to health and safety, and imperil the security of the country in case of shortages and/or high costs.

The optional Energy Element is included in the Shasta County General Plan in recognition of these facts. Energy use is an integral part of daily life and has been included as a separate element in order to draw attention to its importance in the planning process. A major goal of this element is to help recognize that our long term energy supplies and availability are unlikely to follow today's status quo.

The Energy Element establishes guidelines for better management, use and conservation of energy and discusses the potential for development of local sources and alternative energy resources.

6.4.2 Energy and Oil: A Developing Concern

Since the OPEC oil embargo in late 1973, there has been increased concern and much discussion regarding the use of energy. During the second half of the 1970's many basic changes where made to increase energy efficiency of motor vehicles, buildings and many consumer goods and appliances. This late 1970's effort also faced a second oil supply disruption as a result of the 1978 Iranian revolution. New energy sources were sought, including alternatives and traditional petroleum resources. Efforts in California focused on conservation, improved efficiency and alternative sources for electrical generation.

These 1970's efforts led to a sharp reduction in per capita energy use in California and a sharp decline of the dependance on foreign oil in the United States. New petroleum sources, such as from Alaska's north slope, helped to significantly reduce the early 1970's reliance on Persian Gulf oil. As a result, by the early to mid 1980's, worldwide energy supply exceeded demand to a point where petroleum prices dropped to levels approaching pre-1973 inflation adjusted rates. However, in the United States and California, energy demand, and particularly demand for oil, began to rise sharply as a result of lower oil prices, a stronger economy, population growth and a dramatic slowing of continued advances in energy efficiency beginning in mid 1980's. United States oil imports, which had been nearly 48% in 1977 and dropped to a low of 31% in 1984, had jumped to 42% in 1990 at a cost of $55 billion that year. (2) The Iraqi invasion

of Kuwait in 1990 once again brought focus to the idea of our dependence on petroleum as the major energy source. The implications and lessons of the last 20 years should be ample warning that we need to learn to manage energy resources in a manner which takes into account their long-term availability, cost and affect on how we design our developed environment.

6.4.3 Energy Use Patterns and Considerations

Understanding national and state energy use patterns is integral to Shasta County's Energy Element. In 1990, the United States consumed approximately 25 percent of world's oil production in a world that saw oil consumption grow about 2 percent per year during the 1980's. (3) While California produces 47% of the oil it consumes, it was the world's third largest gasoline market behind only the entire United States and the Soviet Union in 1989. (4) California, with 0.6% of the world's population, used approximately 3% of the world's oil. (5) In California, petroleum accounts for 60% of energy use; natural gas accounts for 27.5%; hydro power, nuclear and geothermal account for 10%; and coal, 2.5%. (6) Sources for the State's energy resources are illustrated in Figure E-1.

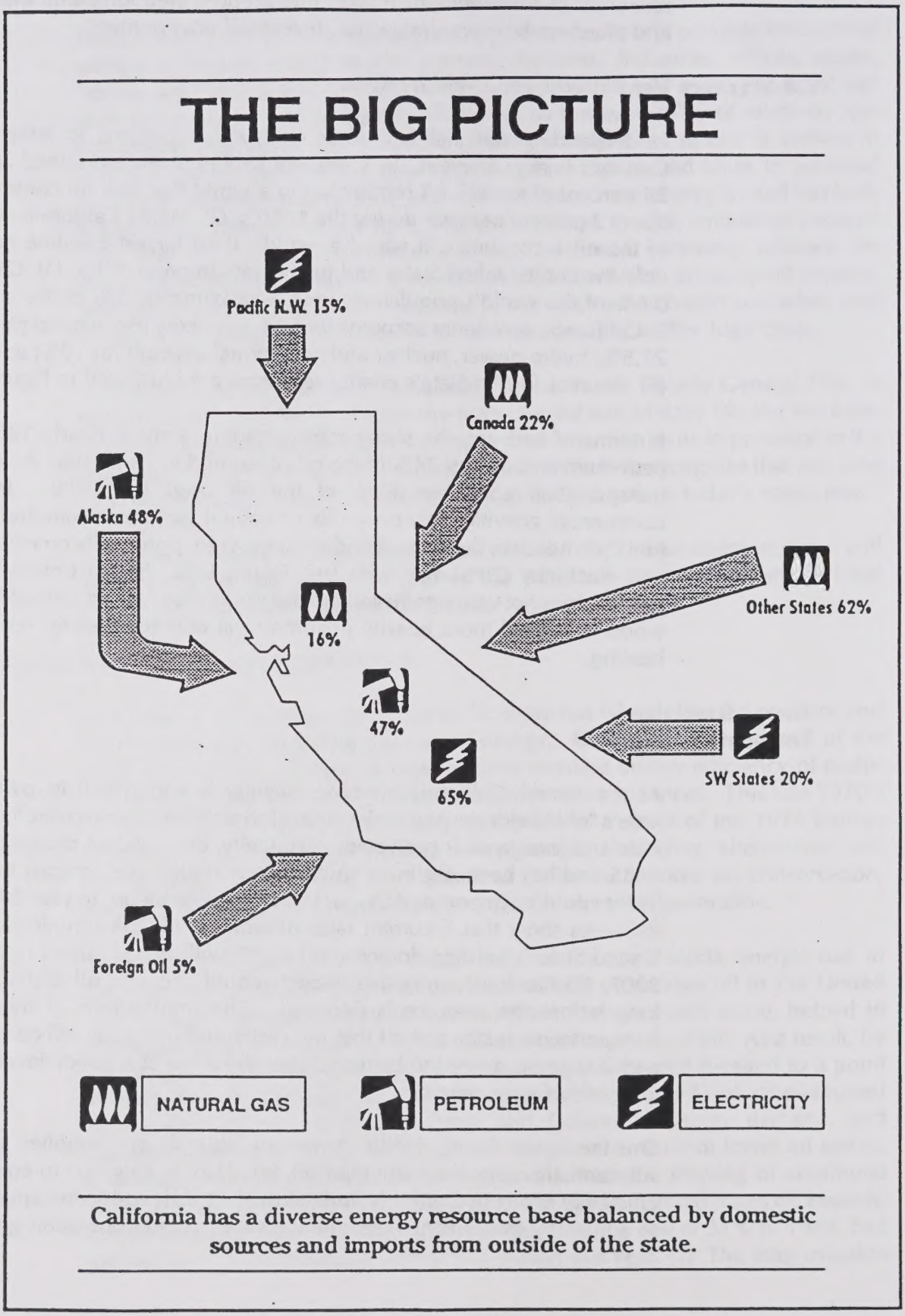
In terms of end use, the state's transportation sector is nearly 100% reliant on petroleum and utilizes 74% of the oil consumed in California. As a comparison, transportation consumes 63% of the oil used nationally. Industrial and commercial activities rely on a mix of natural gas, petroleum and electricity to fuel their needs in the state. Residential uses rely principally on natural gas (68%) and electricity (29%) statewide (see Figure E-2). Shasta County's energy use pattern does not vary significantly to the proportions found statewide, except that wood is utilized more heavily in some rural communities for residential space heating.

Energy Supply and Long-term Implications

As mentioned, California produces slightly less than half its own oil, but the state's "old" fields are past their production peak and increased reliance on out-of-state and foreign oil is projected. Nationally, domestic oil production peaked in 1985 and has been declining since. Some projections forecast that the United States could be importing 60%, or more of its petroleum in year 2000. (7) Other estimates show that if current rates of national oil consumption continues, the United States's existing domestic oil supply will be exhausted in approximately 2007. (8) Obviously, negative impacts could occur to oil dependent activities long before the resource is depleted. The implications of this trend to the transportation sector and all that it directly and indirectly affects are enormous, and it suggests a need to better address the issue at a policy level that includes all levels of government.

On the other hand, North American natural gas supplies appear to be substantially more abundant than oil. (9) Also, largely due to conservation and efficiency efforts in California, long-term electrical production appears to be able to adjust to new demands, despite the state's rapid population growth.

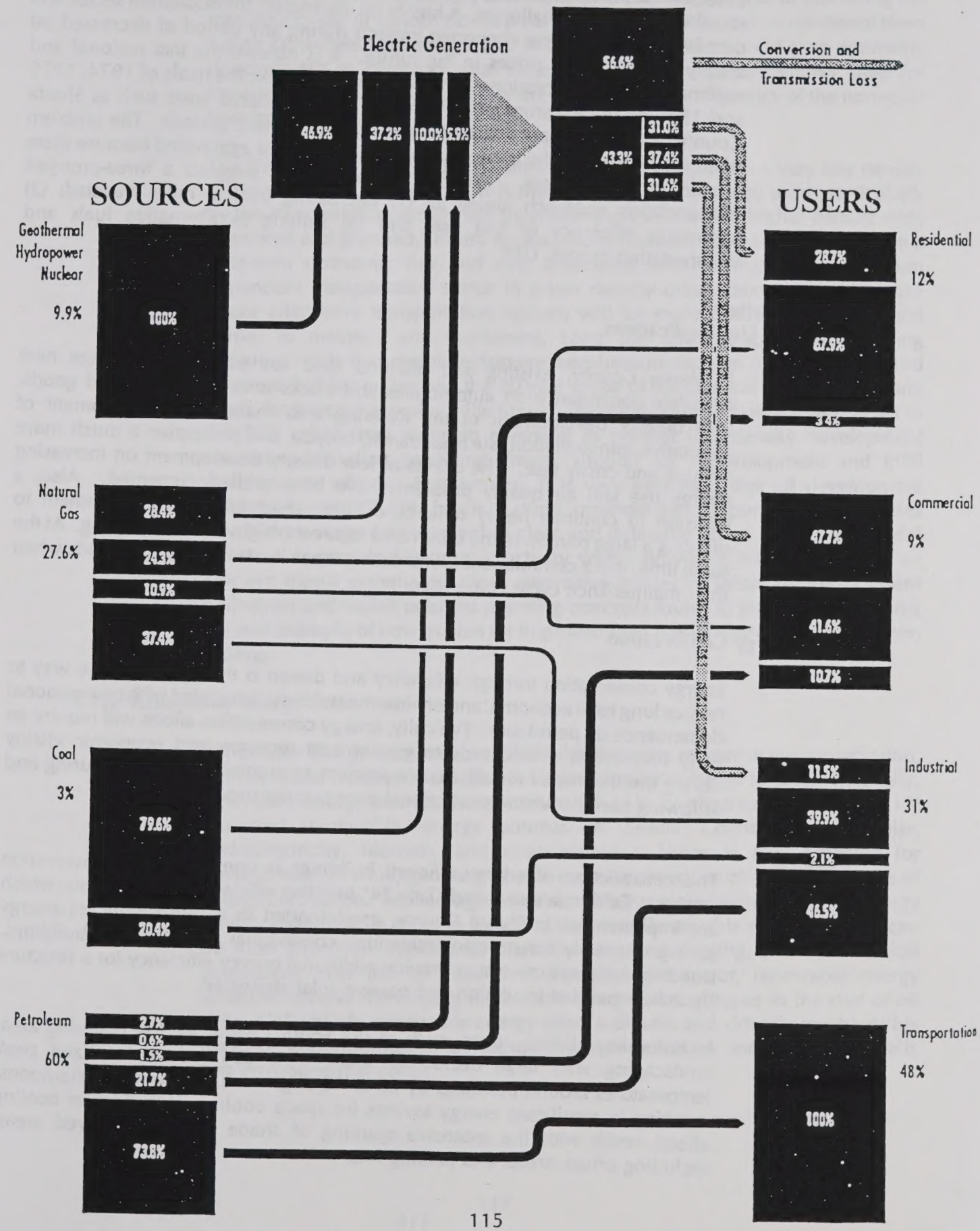
FIGURE E-1



California has a diverse energy resource base balanced by domestic sources and imports from outside of the state.

FIGURE E-2

California Energy Network 1989



Source: California Energy Commission, 1991

Energy in the Transportation Sector

Based on the previous discussion, a future of reliable energy for the transportation sector is the greatest challenge. A highly oil dependent transportation sector will certainly lead to adverse economic impacts during any period of decreased oil supply and increased prices in the future. It is noteworthy that national and regional economic recessions have followed closely on the heals of 1974, 1979 and 1990 oil price disruptions. Rural and resource based areas such as Shasta County can be disproportionately impacted during these periods. The problem of oil dependency in the transportation sector is further aggravated because there are no easy substitutes. The State's energy plan suggests a three-pronged transportation approach aimed at: (1) decreasing vehicle miles traveled; (2) increasing efficiency of fuel use; and (3) shifting to alternative fuels and transportation modes. (10)

Land Use Patterns and Energy Use Implications

In Shasta County, existing and planned land use patterns encourage near complete dependence on automobiles and trucks to move people and goods. Low density development of the Redding area makes the development of alternative transportation, such as transit, bicycle and pedestrian a much more difficult and costly task. The effects of low density development on increasing energy use and air quality problems have been well documented. Also, a decision to continue heavy reliance on the automobile is a commitment to utilizing a large portion of the urban area to streets, highways and parking. At the same time, it is a commitment to increasing repair costs for worn out roads when their maintenance cycle comes due.

6.4.4 Energy Conservation

Energy conservation through efficiency and design is the most effective way to reduce long term economic and environmental costs associated with conventional dependence on petroleum. Typically, energy conservation efforts will require an early investment which leads to greater cost recovery and economic vitality during the lifetime of the alternative product or program, especially during and following periods when conventional energy costs rise.

Building Efficiency

The construction of energy efficient buildings is one important conservation strategy. California's so-called "Title 24" building efficiency requirements, which are implemented in Shasta County, are intended to assure significant energy savings in newly constructed residential, commercial and industrial buildings. Building designers can opt to provide additional energy efficiency for a structure by utilizing added insulation and passive solar strategies.

In hot valley climate zones, such as the South Central Region planning area, landscaping with large deciduous shade trees can reduce localized peak temperatures around buildings by up to 10 degrees during summer afternoons, resulting in significant energy savings for space cooling. (11) Similar cooling affects result with the extensive planting of shade trees over paved areas, including urban streets and parking lots.

Land Use Density and Transportation Planning

It has been shown that density and transportation are so critical in estimating the total energy use of various development types that a well-sited conventional town house consumes less energy and is cheaper per unit to build than sprawling development of detached solar housing. (12) The reduced energy used for transportation is what accounts for the superior energy efficiency of the non-solar townhouse.

The Redding urban area, on the other hand, is developing in a very low density urban pattern. The implication is that total per capita energy used, particularly by the transportation sector, will be greater than would be if higher density were promoted and planned. Based on the above discussions, there appears to be a long-term economic risk and cost associated with relying on a petroleum dependent transportation sector in a low density urbanization setting because future alternative transportation options will be more costly to construct and harder to maintain and implement. Land use and transportation planning decisions made by present decision-makers have impacts on our urban form and structure that last far beyond the 20 year scope of the General Plan, and in many cases, far beyond any of our life times. Therefore, careful planning is needed in the SCR urban area to begin reversing its present low density development character, including providing greater support for redevelopment and infill development efforts. Furthermore, it is very important that all development agencies in the SCR area begin to study, promote and support land use policies which encourage development of clear and definable urban centers and nodal points of human and economic activity which provide a basis to develop an efficient transit system and other alternative modes of urban transit. Current pedestrian and transit oriented planning concepts found in the Sacramento area are one example of how to plan for improved land use-energy efficiency in urban settings.

6.4.5 Renewable Energy Resources

Renewable energy resources, coupled with strategies to encourage conservation, are important features in the Shasta County region's energy future. Nationally, renewable energy sources now account for 13% of electrical generation. (13) Important renewable energy sources in Shasta County include solar, hydroelectricity, biomass, and cogeneration. There is also potential for development of wind, geothermal and waste-to-energy as alternative sources of energy production. Technology improvements associated with renewable energy development will be a key to its rate of success. Renewable energy sources can be most effectively applied for space heating and cooling, and for electrical generation. For the oil dependent transportation sector, renewable energy solutions involve developing marketable alternative fuel types as the cost of oil rises. Collectively, renewable energy offers a diverse and virtually inexhaustible resource, opportunities for developing new base industries, and all at substantially less environmental cost.

Solar

The sun is an abundant energy source in most of Shasta County. The value of the sun as an energy resource can be expressed most meaningfully in terms of the demand for conventional energy sources that can be displaced by its use. Solar energy can be used directly for space and water heating and for industrial process heat.

The sun is also important as its affects the demand for energy. High summer temperatures in the upper Sacramento Valley result in a high seasonal peak demand for electricity for space cooling and refrigeration. The impact of solar radiation on the cooling load of buildings can be moderated to a significant extent through building and site design, including planting of deciduous shade trees.

Passive solar design for space cooling and heating can reduce the annual primary energy demand of a typical single family detached house in the Sacramento Valley by 90% compared to a house built before 1975 without insulation. To achieve such energy savings requires nothing more than efficient construction, insulation, approximately 200 square feet of south facing window area combined with a heat-storage mass (e.g., slab foundation) or about 1,000 square feet of window area, a roof overhang on the south side, and shade on the east and west sides of the buildings. Energy used for water heating can be reduced by 50% for a family of four with the use of 64 square feet of solar collectors. (14)

In the mountain areas the energy used for space conditioning could be reduced significantly as a result of passive design features.

Hydro-electricity

Existing U. S. Bureau of Reclamation electrical generation facilities at Shasta Lake, Keswick and Whiskeytown Reservoirs provide the bulk of hydroelectricity produced in the County. Pacific Gas and Electric Company produces significant hydroelectric power from its facilities in the Pit River and Battle Creek watersheds. A number of small hydro facilities have been constructed on smaller Shasta County creeks during the late 1970's and early 1980's. The prospects for significant new large hydroelectric projects in Shasta County appear to be limited because the most efficient sites have already been utilized. However, a number of smaller retrofit projects could be implemented at existing dams that currently do not produce electricity. On the other hand, any continued development of new small hydro facilities will need to solve environmental concerns involving fish and wildlife habitat and water resource impacts.

Biomass

The use of biomass for direct heating and electrical generation is important in Shasta County. Biomass primarily involves the use of wood for residential space heating and waste wood and other wood products for electrical generation. Potential air pollution problems from concentrated use of wood for residential space heating can be substantially mitigated by installation of newer high efficiency wood stoves. Recent forestry efforts to encourage thinning for fire protection and improving forest growth and health could lead to a more managed and reliable availability of wood as a biomass energy source during the planning period.

Cogeneration

Cogeneration involves the use of waste heat to produce heat or electricity. Cogeneration is currently utilized by several wood products firms located in Anderson, Burney and Redding. Although use of cogeneration technology and processes does not allow these firms to be energy self-sufficient, the systems can generate enough energy to supply a major portion of plant needs during peak demand periods.

6.4.6 Role of Government

The nation's energy policy is a reflection of what is being done at the local level of government. Three roles which local government may play regarding energy use are the following:

1. Act as an educator, informing and encouraging its citizens as to the benefits of energy conservation and planning. This is a major focus of the Energy Element.

2. As a large energy consumer, government can use its own actions as models for energy conservation and planning. Through its actions, local government may elect to act as a provider of incentives that encourage energy conservation. For example, conversion of an agencies vehicle fleet to alternative fuels could stimulate other firms to do the same.

3. Local government may exercise its police power to adopt regulations requiring energy conservation. Local government planning programs for air quality and congestion management may also provide more efficient energy use.

County Energy Strategy

Shasta County's energy strategy should focus on implementing policies and programs that can be most effectively achieved at the local level. Besides supporting implementation of the following objectives and policies, the County should support legislation which is consistent with its overall energy strategy.

6.4.7 Objectives

E-1 Promote energy savings by integrating transportation, land use and air quality planning.

E-2 Increase utilization of renewable energy resources by encouraging development of solar, hydroelectric, biomass, waste-to-energy and cogeneration sources.

E-3 Promote energy education and information as a way of assisting the public in making informed decisions regarding energy efficiency.

E-4 Conserve nonrenewable energy resources, specifically raw materials, transportation fuels and resource land area.

6.4.8 Policies

E-a During the development of urban area plans in the South Central Region, the County, in conjunction with the Cities of Anderson and Redding, shall work towards a land use pattern that would support a regional transit route.

E-b Encourage development patterns which reduce the number of miles driven in personal vehicles through consideration of higher density and mixed land uses, transit and pedestrian oriented developments, and increased jobs-to-housing balance. At the community level, the County shall adopt land use patterns which reduce the need to travel outside the community for basic commercial services.

E-c The County should develop energy thresholds and standards which assist applicants for development projects in designing conservation features into their proposals. Energy threshold standards could also be used to assist in the evaluation of potential energy consumption impacts which may be environmentally significant.

E-d Priority shall be given to energy projects and programs that provide jobs and other economic benefits within the County for County residents.

E-e Economic development activities and grant programs should emphasize efforts that permanently improve energy efficiency in existing and new buildings, including for programs involving low and moderate income housing.

E-f Recycling and integrated waste management goals which are energy efficient shall be encouraged and promoted.

E-g Revision or development of landscaping and tree protection standards should provide consideration to improving building energy efficiency and shading of streets and parking areas during warm seasons.

E-h Subdivision design review should include standards for street and building orientation which allow appropriate solar access as well as landscape shading for cooling and heating in urban and town centers.

E-i The County should support efforts to amend California's timber harvest rules that encourage thinning and harvest of biomass fuels for purposes of improving wildland fire protection and forest productivity in developed areas, such as in the Shingletown area, and which are capable of timber production.

E-j The County should develop and implement plans to convert its vehicle fleet to alternative fuels that meet or exceed air quality standards.

E-k Encourage and promote increased telecommunication activities for both private and public sector employees in order to help decrease energy use and reduce air quality impacts.

Footnotes:

1. Between 1950 and 1990, national energy demand increased nearly two and a half times (250%) while the population increased approximately 63%.

2. National Energy Strategy, 1991, pgs. 75-78

3. National Energy Strategy, 1991, pg. 74; Powering the US into the 21st Century, Christian Science Monitor (reprint), 1991, pg.6

4. California Energy Plan, 1991

5. Golden State Report, April, 1989, pg 16

6. California Energy Plan, 1991, pg 18

7. National Energy Strategy, 1991, pg. 77

8. Powering the US into the 21st Century, The Christian Science Monitor (reprint), 1991, pg. 8

9. National Energy Strategy, 1991

10. California Energy Plan, CEC, 1991, pg. 3

11. Planning Solar Neighborhoods, California Energy Commission, 1980, pg. 98.

12. Planning Solar Neighborhoods, CEC, 1980, pg. 84.

13. Powering the US into the 21st Century, The Christian Science Monitor (reprint), 1991, pg. 9.

14. Shasta County General Plan, 1984

6.5 AIR QUALITY

"AIR - A COLORLESS , ODORLESS, INVISIBLE SUBSTANCE. LIFE FLOURISHES WITH IT; WITHOUT IT, THE EARTH WOULD CEASE TO EXIST. IT CAN BE DESCRIBED AS LIGHT, COOL AND CRISP OR HOT, STALE AND STIFLING."[1]

6.5.1 Introduction and Purpose

Clean air is one of the most precious resources fundamental to daily life. The development pattern represented by modern cities and their suburbs has fostered an increasing dependency on the automobile, thus creating one of the major threats to a healthy environment, particularly air quality. In order to meet the challenges of strict environmental laws designed to ensure the nation's cities have clean air, Shasta County must comply with new regulations and thresholds for meeting this objective. Furthermore, performance in meeting this target will be strictly monitored in accordance with specific timetables for implementing air quality programs and policies.

The Air Quality Element recognizes the need for and importance of clean air. It addresses the requirements of Government Code Section 65560(b)4, which calls for the establishment of Open Space Plan policies and programs designed to protect "open space for public health and safety, including, but not limited to ... areas required for the protection and enhancement of air quality."

In addition to the Air Quality Element, objectives and policies found in the Community Development, Circulation, Housing and Energy Elements recognize the common fabric necessary for establishing a permanent commitment to promote and protect clean air.

Two factors figure significantly in developing and implementing programs to achieve clean air goals. The first, public education, is basic to providing citizens with an awareness of the importance of healthy air and ways that it can be managed and protected. Efforts on behalf of government as well as private agencies need to be melded to accomplish this task.

The second factor, regional cooperation, is equally important. Air pollution knows no jurisdictional or political boundaries. Poor land use practices evident in one locality can significantly affect public health and the quality of life in neighboring jurisdictions. Therefore, for Shasta County to succeed in meeting state and federal air quality mandates, it is important that Shasta County, the cities and other agencies involved with air quality concerns, maintain a program that easily transcends jurisdictional boundaries. In this fashion, the General Plan can play a pivotal role in disseminating information and establishing policies that will aid in the goal of protecting and improving air quality throughout Shasta County.

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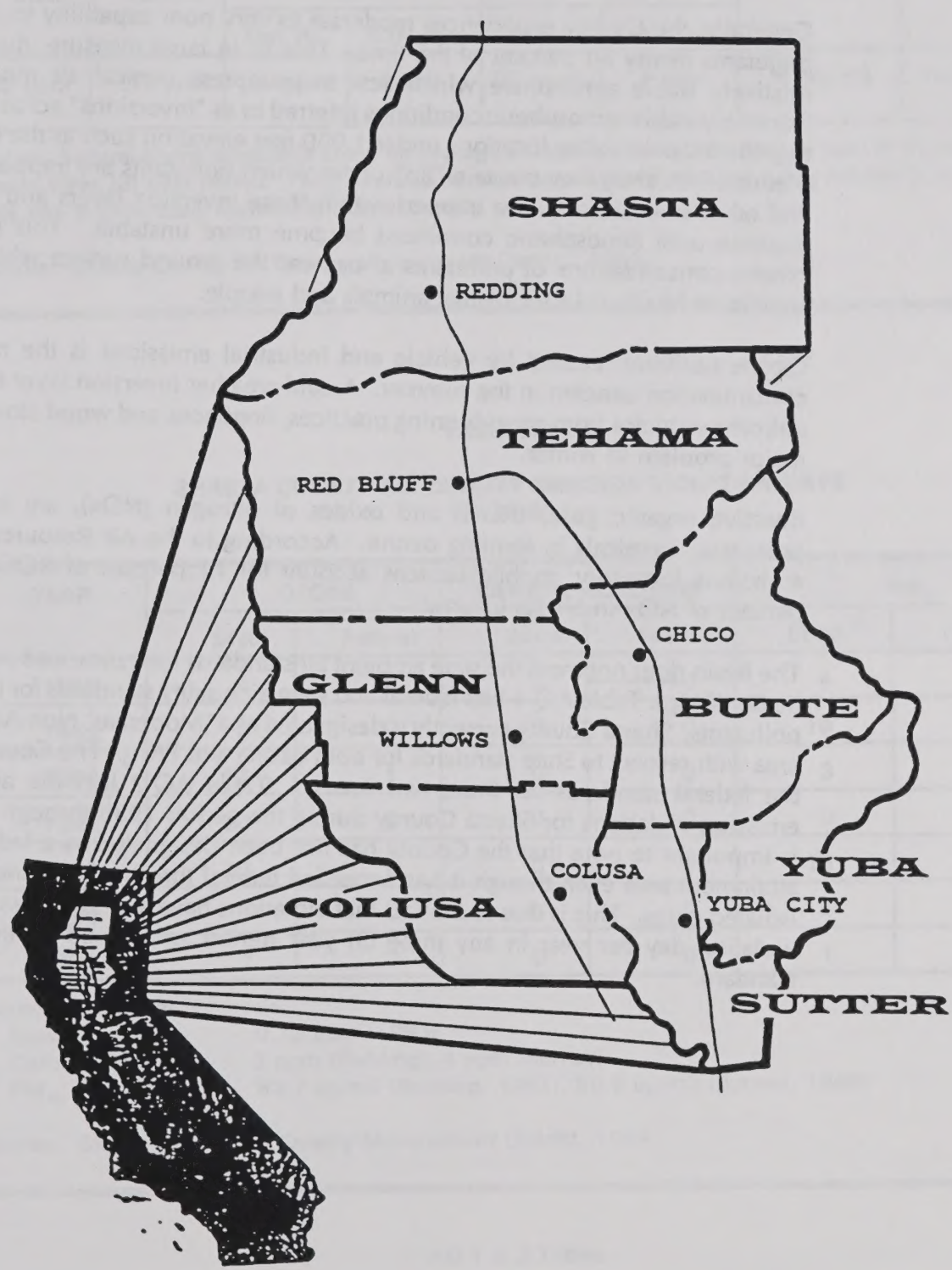
[1] Federal Highway Administration, Air, Publication No. FHWA-PD-94-005, (Department of Transportation, October, 1993).

FIGURE AQ-1

NORTHERN SACRAMENTO VALLEY AIR BASIN



6.5.2 Environmental Setting

Shasta County sits at the extreme northern end of the Sacramento Valley. Seven counties form the Northern Sacramento Valley Air Basin (See Figure 1). Surrounded by the Klamath and Coastal Mountains to the northwest and the Cascade Mountains to the northeast and east, coupled with the relatively calm winds and fairly stable atmospheric conditions, the potential for significant air pollution in the Basin is considered high.

Generally, the County experiences moderate to very poor capability to disperse pollutants nearly 80 percent of the time. This is, in large measure, due to the relatively stable atmosphere which acts to suppress vertical air movement. Extremely stable atmospheric conditions referred to as "inversions" act as barriers to pollutants. In valley locations under 1,000 feet elevation such as the Redding Metropolitan area, they create a "lid" under which pollutants are trapped. Dust and other pollutants can be trapped within these inversion layers and will not disperse until atmospheric conditions become more unstable. This situation creates concentrations of pollutants at or near the ground surface which pose significant health risks for plants, animals and people.

Ozone pollution caused by vehicle and industrial emissions is the major air contamination concern in the summer. A cold-weather inversion layer that traps airborne particles from open-burning practices, fireplaces and wood stoves is the major problem in winter.

Reactive organic gases (ROG) and oxides of nitrogen (NOx), are important precursor chemicals in forming ozone. According to the Air Resources Board emissions inventory, mobile sources account for 71 percent of ROG and 84 percent of NOx in Shasta County.

The Basin <u>does not</u> meet the state ambient air standards for ozone and particulate matter (PM_{10}). Table AQ-1 lists federal and state air quality standards for these two pollutants. Shasta County currently is designated as a "Moderate" Non-Attainment area with respect to State standards for both ozone and PM_{10}. The County meets the federal standards for these two items. Table AQ-2 lists the air quality emission violations for Shasta County during the period 1988 through 1994. It is important to note that the County has not been designated as a federal non-attainment area even though it has exceeded federal thresholds in one or more isolated cases. This is due to the fact that violations have averaged less than one violation day per year in any three (3) year period as allowed by the federal standard.

TABLE AQ-1

APPLICABLE FEDERAL AND STATE AIR QUALITY STANDARDS

Ozone		Carbon Monoxide				Particulate Matter (PM_{10}) 24 Hour Standard	
State	Federal	State		Federal		State	Federal
		One Hr.	8 Hr. Av.	One Hr.	8 Hr. Av.		
.09 ppm	.12 ppm	20 ppm	9 ppm	35 ppm	9 ppm	50 ug/m3	150 ug/m3

Notes: Federal ozone standards allow an average of less than one violation per year in the most recent three (3) year period. PM_{10} refers to particulate matter 10 microns (u) or smaller in size. This size is potentially harmful to human health.

Source: Shasta County Air Quality Management District, 1991.

TABLE AQ-2

SHASTA COUNTY AIR QUALITY EMISSION VIOLATION DAYS 1988-1994

YEAR	OZONE		CARBON MONOXIDE		PM_{10}	
	State	Federal	State	Federal	State	Federal
1988	5	0	0	0	4	0
1989	0	0	0	0	10	0
1990	11	1	0	0	3	0
1991	20	0	0	0	9	0
1992	10	0	0	0	15	0
1993	1	0	0	0	2	0
1994	7	0	0	0	1	0

Notes: Peak recorded levels:

Ozone - 0.13 ppm (1990)
Carbon Monoxide - 3 ppm (Redding), 4 ppm (Burney)
PM_{10} - 83.7 ug/m3 (Redding, 1991), 96.6 ug/m3 (Burney, 1989)

Source: Shasta County Air Quality Management District, 1994.

6.5.3 Land Use, Air Quality and Transportation Linkage

"Creating environments that are more conducive to alternative transportation modes such as walking, biking, and transit can result in more livable communities with reduced congestion, increased personal mobility and cleaner healthier air". [2]

Understanding the relationships or "linkage" among land use, air quality and transportation is a challenge for local jurisdictions in educating its citizenry about air quality issues. Explaining the cause-effect relationship of: (1) the land use pattern on transportation systems; (2) the transportation system on the land use pattern; and (3) the effects of these two factors on the area's air quality is fundamental to affecting individual decisions regarding transportation options and the location of housing and businesses.

Shasta County enjoys a reputation of having a major urban center (Redding Metropolitan area) surrounded by an abundance of excellent rural living areas. However, the relatively low residential densities found in the county's rural residential and suburban residential designations are major contributors to perpetuating an auto-dependent life-style that is at odds with transportation (congestion management) policies and air quality goals.

Pollution from cars and trucks represents 43 percent of hydrocarbons emissions, 57 percent of nitrogen oxide emissions and 82 percent of carbon monoxide emissions in urban areas.[3] By 2005, California's population may increase 26 percent, yet car ownership is projected to increase 33 percent, fuel use 38 percent, vehicle miles traveled (VMT) 51 percent and congestion 200 percent.[4] Yet in many instances, local land use and zoning practices perpetuate reliance on the automobile as the primary mode choice. To change the composition in the land use, mobility and air quality equation to comply with more stringent air quality standards, the County must accomplish reductions in vehicle miles traveled and vehicle trip lengths. A 1990 study comparing travel behaviors in several neighborhoods located in the San Francisco Bay area concluded that for each doubling of density, the average vehicle miles traveled per person each year is reduced by 25 percent to 30 percent.[5]

New innovative strategies to reduce travel demand need to be considered. Allowing and encouraging mixed use centers at major arterial intersections or transit stations, increasing residential densities allowed in the Suburban Residential and Urban Residential General Plan designations in areas served by transit, and promoting alternative modes choices for travel are among ways the County can address air quality impacts created by vehicles. Redesigning how employment and living areas are distributed by encouraging more favorable jobs-

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[2] Terry Parker, "The Land Use-Air Quality Linkage: How Land Use and Transportation Affect Air Quality," California Air Resources Board, 1994, p. 1.

[3] California Energy Commission, "Land Use and Transportation Planning Opportunities, Energy Aware Guide, January, 1993.

[4] loc. cit.

[5] Parker, p. 7.

housing ratios can also assist in reducing air quality impacts created by new development.

Explaining the need for a balance between expectations of traditional life-styles and the harsh realities of imminent state and federal penalties for failing to comply with strict air quality regulations, therefore, is a priority for public information programs. Without such an effort, the County may be handicapped in its efforts to meet air quality goals.

6.5.4 Health Effects/Property Damage

Air quality that meets state and federal standards is important in ensuring the long-term health of the County's citizens. Studies have shown that sustained exposure to high levels of ozone can cause a number of respiratory impacts, including cardiovascular disease. It can lead to significant damage to lung tissue. Children, senior citizens and those individuals working or enjoying outdoor recreational activities are particularly susceptible to high levels of ozone.

Particulate matter, especially particles less than 10 microns in size, also presents a significant health threat to individuals. Particulate matter often bypasses the body's natural filtering system and penetrates deeper portions of the lung. Known effects of exposure to PM_{10} are incidences of bronchial disease, coughing and minor throat irritation. At higher exposures, particulate matter has been associated with the aggravation of respiratory and cardiac diseases, increased lung infection, and death.

Crop damage caused by air pollution is estimated to be $300 million each year in California and up to $5 billion nationwide.[6] Plant damage is often evident in stunted growth or diminished yields. Among the recorded effects of air pollution on plants are flower and foliage discoloration; bloom failure; plant malformation; leaf, needle and fruit drop; and failure of fruit to ripen.

6.5.5 Regulatory Setting:

Federal Laws

The federal Air Quality Act of 1967 was originally adopted to create a national program to control automobile emissions and air pollution from stationary sources at both the local and state levels. In 1970, 1977 and 1990, amendments to the Clean Air Act (CAA) were passed to further define the role of the federal government in regulating air pollution.

Among the amendments to the federal CAA were requirements for individual states to develop new regulatory programs and establish time frames within which to attain new air quality standards. Included with these new requirements were tighter emission standards for vehicles and fuels.

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[6] Bay Area Air Quality Management District, 1993 Air Quality Handbook, San Francisco, 1993, p. 14.

Federal law known as Prevention of Significant Deterioration (PSD) applies in all areas of Shasta County and requires that measures be taken to prevent significant deterioration of air quality in regions where federal air quality standards are being met. Another requirement of the PSD program is to protect air quality in areas such as national parks, wilderness and recreation areas. In Shasta County, two such areas are subject to the PSD program: Lassen Volcanic National Park and Thousand Lakes Wilderness area.

State Laws

• California Clean Air Act of 1988.

California actually started regulating air pollution in 1969 with the passage of the Mulford-Carrel Act. Subsequently, with the passage of the federal CAA and its related amendments, California passed the California Clean Air Act (CCAA) of 1988. The CCAA established a legal mandate for local jurisdictions to meet state ambient air quality standards by the earliest possible date. It lists emission reduction programs for both stationary and mobile sources, especially automobiles. Ambient air standards are established for Ozone, Carbon Monoxide, Oxides of Nitrogen, Sulfur Dioxide, PM_{10} and Lead. Shasta County is unclassified for Carbon Monoxide, Sulfur Dioxide and Lead. The County is classified as a "Moderate" non-attainment ozone area with a goal set for attaining the state ambient air standard for ozone by 1997. It is uncertain if this goal will be accomplished within this time period.

The California Air Resources Board (CARB) is the primary air quality agency in the state. It has responsibility for developing and implementing motor vehicle pollution control programs and has oversight authority over California's air pollution control program. Among its responsibilities, the CARB prepares and disseminates information to local agencies in addition to coordinating responsibilities and regulations among the state's various air pollution control districts. Additionally, the CARB works directly with the Environmental Protection Agency (EPA) in coordinating overlapping federal and state programs regulating air pollution.

The CCAA requires local air districts to prepare plans to bring their areas into compliance with state air quality standards. The goal of the CCAA is to attain state air quality standards by the earliest possible date. The CCAA sets a goal of achieving a 5 percent per year reduction in emissions until the standards are met.

• Air Toxic "Hot Spots" Act.

In 1990, the Air Toxics "Hot Spots" Information and Assessment Act was passed. This law sets a schedule for firms to submit emission inventories which quantify and characterize toxic air emissions. These toxic air inventories are reviewed by the air district and prioritized based on the proximity of the facility to possible receptors, the toxic nature of its emissions and other factors.

Facilities ranked as high priority according to an Air Resources Board protocol are required to perform a "health risk assessment". If the risk assessment indicates the presence or potential for a health threat, the facility is subject to immediate corrective action. This program is on-going in that affected firms are required to submit updated emission inventories every four (4) years.

- Motor Vehicle Registration Surcharge Funding Program.

In 1993, the California Legislature amended the California Health and Safety Code, Division 26, Part 5, Chapter 7, Section 44220 et seq. through passage of Assembly Bill 2766. AB 2766 provides for the imposition of motor vehicle registration fees by air quality management districts to be used "... to reduce air pollution from motor vehicles and for related planning, monitoring, enforcement, and technical studies necessary for the implementation of the CCAA ..."

In 1993, the Shasta County Planning Division (SCPD) initiated the County's first agreement with the Shasta County Air Quality Management District (AQMD) under this program. The County received approximately $50,000 to complete a series of tasks aimed at improving the County's air quality. It is expected that this program will be renewed annually and will focus on key issues that link air quality, land use and circulation. This program can also serve as a catalyst in coordinating local efforts in meeting state and federal air quality regulations.

Shasta County

- Air Quality Management District.

The Shasta County Air Quality Management District (AQMD) is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards for ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10}) and certain toxic air pollutants emitted by industrial and manufacturing sources.

Among its responsibilities is the development and administration of the County's Air Quality Attainment Plan (AQAP). The AQMD adopted an AQAP in September 1991 that is designed to work towards achieving the State ozone standard at the earliest practical date. The AQAP addresses air pollution controls for stationary, indirect and area sources. Indirect sources are development projects which attract motor vehicle traffic. Area sources are small but numerous generators of air contaminants such as, but not limited to, consumer products and residential space heating.

The County's AQAP was updated during 1994. Progress toward meeting State air quality goals was noted during this update. If the County does not meet state ozone standards by 1997, a major revision of the AQAP is required. The County could risk the possibility of being reclassified as a "serious" non-attainment area instead of the current "moderate" classification.

• Regional Transportation Planning Agency.

The Shasta County Regional Transportation Planning Agency (RTPA) is the entity responsible for area-wide (Shasta County) transportation planning. This responsibility includes development and adoption of regional transportation goals, objectives and policies which provide direction for transportation planning.

Each year, the RTPA must allocate funds from the Local Transportation Fund and State Transit Assistance Fund. The RTPA administers its transportation planning responsibilities in a manner that assures full compliance with the laws and guidelines prepared by the RTPA, Caltrans and the Federal Department of Transportation (includes associated air quality concerns).

The Regional Transportation Plan's (RTP) overall goal is "... to provide for an effective, efficient, safe, balanced and coordinated transportation system, at reasonable cost that conserves energy, protects air quality, serves the needs of the people and supports the area's general plans".[7] Among findings listed in its "Significant Needs Summary" are "Programs to arrest and reverse the deterioration of air quality in Shasta County to be developed and implemented before the County becomes a federal non-attainment area."[8]

The RTPA also functions as the Metropolitan Planning Organization (MPO). In this capacity, the RTPA coordinates the receipt and dissemination of federal and state highway improvement funds for the County and its incorporated cities. It also addresses the performance of transportation plans relative to their contributions to improving air quality. Assessments are required periodically to determine if state and federal air quality requirements are being met in a timely fashion.

• Congestion Management Agency.

In June, 1990, California voters passed AB 3093 requiring local transportation planning programs to be implemented in concert with a Congestion Management Program (CMP). In compliance with this law, the cities of Redding and Anderson and the Board of Supervisors designated the RTPA as the Congestion Management Agency (CMA). In this capacity, the CMA is responsible for ensuring that the cities and the County are complying with the requirements of the CMP. Among the main objectives of this program is "...to develop mitigation measures that will provide relief from and/or prevent traffic congestion and provide corresponding air quality benefits where possible."[9] Additionally, the CMA must determine if the cities and the County are complying with the CMP. Its findings are required to be based on a number of factors including:

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[7] Shasta County Regional Transportation Planning Agency, Regional Transportation Plan For Shasta County, Redding, Ca., December, 1993, Pg.1-1.

[8] loc. cit.

[9] Shasta County Regional Transportation Planning Agency, Congestion Management Program, Redding, Ca., July, 1993, pg.1.

• "Adoption of an Air Quality Element that at a minimum contains policies addressing indirect sources of air pollution and compliance with all subsequent AQMD control measures".

• "Implementation of a program for on-going review and amendment of the General Plan policies and Zoning Ordinance provisions in order to promote a reduction of dependency on the automobile as a primary mode of transportation."[10]

Shasta County's CMP was adopted in 1991 and updated in 1994. Included among its recommendations is a Land Use Impact Analysis Program (LUIAP), to be adopted by all local jurisdictions. A critical part of this item is a requirement that public agencies use appropriate mitigation measures to address air quality impacts exceeding thresholds established by the AQMD. The LUIAP is discussed in greater detail in the following section.

6.5.6 Mitigation Measures and Implementation Program

Traditional air quality management strategies have focused on: (1) controlling new and existing stationary sources in the industrial and manufacturing sectors, and (2) reducing motor vehicles emissions. While these attempts have been considered effective, increases in the number of emission sources, particularly mobile sources, have nearly offset the modest gains realized. Hence, air quality in the County has not witnessed any significant improvements.

Feasible Strategies for Improving Air Quality.

A number of elements can provide a platform from which the need to protect local air quality can be addressed. Included among these concepts are:

- Compact Development
- Residential Density
- Employment Density
- Clustered/Mixed Use Centers
- Infill Development
- Alternative Transportation Modes/Innovative Street Designs

Compact development can be achieved by a variety of means. Increasing residential density where infrastructure can be provided and integrating non-residential uses (i.e., commercial, office, industrial, etc.) through innovative site designs are several ways by which communities can make more efficient use of land and subsequently realize significant air quality benefits.

Residential density plays a key role in influencing impacts on air quality. The location of neighborhoods and numbers of dwelling units per acre, relative to shopping, employment centers and transit facilities is a critical element to realizing any air quality goals. The balance of these ingredients determines such factors as the use of automobiles, the length of trips to conduct daily activities and the role walking and biking can play in the overall air quality strategy.

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10 op. cit., p. 50.

Employment density is tied to locational criteria and transportation corridors that can distribute employees and goods and services in an efficient fashion. Policies and programs aimed at maximizing land use, particularly at key industrial and commercial locations can, among other benefits, promote air quality goals.

Clustered/Mixed use development centers reflect a new thinking in how land uses are arranged in the urban setting. Traditional ideologies of separating land uses need to give way to acceptance of benefits to be realized by systematically integrating various land uses guided by innovative performance and design criteria. Numerous examples of high quality developments throughout the country have proven this is an accepted practice that yields significant air quality benefits.

Infill development is closely associated with the previous discussions regarding mixed use, compact development and residential densities. Vacant, under-utilized parcels within cities and rural community/town centers are prime candidates for complementing the goals of reducing traffic congestion and for contributing to efforts for improving air quality. Coupled with the potential for increasing residential densities along key transit corridors, this approach can prove valuable in implementing air quality policies.

Alternative transportation modes, coupled with support for new and innovative road and street designs can significantly aid the goal of improved air quality. This can be accomplished through a better understanding of how integrated circulation systems can provide a higher priority for accommodating pedestrian needs. This a vital part of the overall transportation planning process.

Mobile/Indirect Source Review.

The County's AQAP contains a blend of strategies that have been specifically designed to address air pollution problems created by mobile sources. This package of five components is referred to as the County's Transportation Control Measure Plan (TCM plan) and includes:

- Traffic Flow Improvements
- Transit Improvement Program
- Employer-Based Commuter Reduction
- Indirect Source Review
- Public Information Program

The first two items involve transportation system management programs and improvements which rely on existing transportation programs. These efforts include parking management, car pooling, road and traffic flow improvements, increased use of transit, bicycle/pedestrian accessibility and park and ride facilities. The success of these programs is closely linked to increasing efficient use of vehicles and finding desirable alternatives to use of the automobile.
Commuter travel produces one-quarter of the County's total transportation emissions. The objective of the Commuter Reduction Program is to reduce commuter vehicle miles traveled (VMT). Commuter reduction programs practiced in larger metropolitan areas involve developing more "air quality friendly" benefits with a favorable "jobs-housing" balance. Where people work relative to where they live significantly influences air quality.

For example, "cold start" emissions, resulting from vehicles that have not been driven for at least one hour, produce one-half of the total emissions from a vehicle trip two (2) miles or shorter in length. Therefore, if the County and other local jurisdictions can succeed in reducing the number of vehicle miles traveled, particularly short trips to employment centers and shopping areas, it can make significant strides toward controlling exhaust emissions.

Indirect source review programs involve development projects which generate or indirectly attract sources creating mobile air emissions. Examples of such facilities are shopping centers, office complexes and public employment centers. The objective of this measure is to reduce indirect sources of emissions from new or modified development projects by reducing the pollution volume or altering the critical time when emissions are released and have the most impact on air quality.

Finally, an important part of promoting the County's TCM program is development of public education/information programs describing air quality benefits associated with multi-modal transportation options. Through the combined efforts of the Air Quality Management District and the Community Education Section of the Department of Resource Management, a number of successful pilot programs have been initiated. Other programs are anticipated to respond to the need to persuade citizens to consider alternative methods of transportation that provide significant air quality benefits.

Land Use Impact Analysis Program.

As part of an integrated effort to systematically review all discretionary permit applications, the Shasta County Planning Division has developed a Land Use Impact Analysis Program (LUIAP). This program was created as part of the County's Congestion Management Plan. Important among its features, the LUIAP strengthens the current permit processing system with an improved method to address environmental issues required by the California Environmental Quality Act (CEQA).

CEQA requires that public agencies take effective action in addressing potentially significant environmental impacts associated with a "project". Significant effects have been defined to include situations where a project "violates any ambient air quality standard, contributes substantially to an existing or projected air quality violation or exposes sensitive receptors to substantial pollutant concentrations".[11] To prevent significant avoidable damage to the environment, CEQA requires changes in projects through use of alternatives or mitigation measures when a governmental agency finds the change to be feasible.

The lead agency must prepare or cause to be prepared an Environmental Impact Report (EIR) analyzing significant effects and suggesting feasible means, if any, of mitigating or avoiding them if it finds that there is substantial evidence that a project may produce potentially significant adverse environmental impacts.

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[11] Michael H. Remy, Tina A. Thomas, James G. Moose and J. William Yeates, Guide to the California Environmental Quality Act, 7th ed., Solano Press Books, Point Arena, Ca., 1993, p. 724.

Although significant impacts might occur as a result of a project, in some cases the project proponent can modify the project to eliminate all significant impacts or reduce them to a point where clearly no significant effect on the environment would occur. In those instances, the lead agency can satisfy its CEQA obligation by filing a "mitigated negative declaration."
Therefore, the LUIAP provides an opportunity to apply appropriate development conditions/mitigation measures including those which address potentially significant air quality impacts. It recognizes the correlation between land use and air quality and provides a comprehensive approach to assess these impacts.

- Computer Modeling.

A key feature of the revised environmental review process will be use by the SCPD of the latest computer modeling strategies recommended by the AQMD. The SCPD will use the County's CARB approved URBEMIS computer model (or other recommended model) to evaluate potential air quality impacts. The URBEMIS model utilizes a computer program for quantifying emissions resulting from increased automobile traffic from new or modified land uses. The program evaluates the number of vehicle trips generated, vehicle miles traveled for each type of trip taken and the associated air emissions. Output generated by the model will aid the county in preparing appropriate development conditions/mitigation measures addressing significant air quality impacts.
Included with this approach will be assessments for the following items:

- Potential air quality emissions exceeding Level "A" or Level "B" thresholds as established by the AQMD.

- The effectiveness of proposed emission offsets.

- PM_{10} emissions from wood heating devices exceeding adopted AQMD thresholds.

- Potential emissions of toxic or hazardous air pollutants.

- Emission Thresholds and Mitigation Measures.

The AQMD has adopted air quality thresholds that will be used in conjunction with Planning Division's use of the URBEMIS model. These thresholds are consistent with the New Source Review Rule 2:1 adopted by the Air Pollution Control Board in 1993 as required by the CCAA. The thresholds are listed in the following table.

TABLE AQ-3

AQMD AIR QUALITY EMISSION THRESHOLDS

LEVEL "A" THRESHOLDS		
OXIDES OF NITROGEN (NOx)	REACTIVE ORGANIC GASES (ROG)	INHALABLE PARTICULATE MATTER (PM_{10})
25 lbs. per day	25 lbs. per day	80 lbs. per day
LEVEL "B" THRESHOLDS		
137 lbs. per day	137 lbs. per day	137 lbs. per day
Note: These thresholds will be applied during SCPD's CEQA review process. Source: Shasta Co. AQMD		

In addition to these thresholds, the Planning Division will use a uniform method for applying mitigation measures which address air quality impacts. These mitigation measures are described as Standard Mitigation Measures (SMM) and Best Available Mitigation Measures (BAMM). Application of appropriate SMM and BAMM will be decided during the Planning Division's environmental review process, prior to scheduling a project for public hearing.

As a part of this program, the County will also work toward establishing equity in resolving significant air quality impacts created by cumulative emissions. Part of this effort will be aimed at reducing the potential for larger projects to shoulder a disproportionate share of the burden for cumulative air quality impacts. The approach will attempt to balance or distribute the responsibility for mitigating cumulative impacts created by all projects and thus forestall the County's designation of a "Moderate" or "Serious" non-attainment status for federal ozone standards.

The prescribed list of SMM will be applied to each discretionary application as part of an effort to reduce cumulative air quality impacts. Included as part of the initial project review process will be a requirement of all applicants to supply the Planning Division with information that will aid in determining estimated emission totals. This information will also be incorporated as part of an ongoing permit tracking system. This will augment the Planning Division's monitoring program for assessing cumulative land use air quality impacts throughout the South Central Region as well as other areas of the County.

Also featured as part of this process will be use of the Shasta County Travel Demand Model (TDM). The TDM is managed by the City of Redding Public Works Department and is an important tool in congestion management/air quality analysis. The TDM is used in determining impacts created by projects that have a potential for generating 1500 vehicles per day (vpd) or more. The 1500 vpd threshold is also important for air quality analyses as this level has been identified as a critical benchmark for establishing and identifying a significance level for CEQA air quality review purposes.

The sequence for applying SMM and BAMM is outlined below:

1. Apply SMM to all projects based on potential air quality impacts. This effort will help contribute to reducing cumulative impacts.

2. Apply SMM and appropriate BAMM when a project exceeds Level "A" thresholds. The BAMM will be applied to any project which exceeds Level "A" thresholds. The appropriate type and number of BAMM applied to a project will be based on the unique characteristics of the project. BAMM will be selected from a list of measures kept updated by the Shasta County Planning Division and the AQMD.

3. Apply SMM, BAMM and special BAMM (when project exceeds Level "B" thresholds) based on their emission reduction potential to lower project emissions below Level "B" thresholds. The AQMD will advise the Planning Division of the efficiency of proposed emission measures as part of the effort to reduce project emissions below Level "B" thresholds.

4. If application of the above procedures results in reducing project emissions below Level "B" thresholds, the project can proceed with an environmental determination of a Mitigated Negative Declaration assuming other project impacts do not require more extensive environmental review.

5. If project emissions cannot be reduced to below Level "B" thresholds, emission offsets will be required. The Planning Division may seek the assistance of the AQMD regarding other efforts and measures that could be used to reduce unmitigated emissions exceeding the 137 lbs. per day. If, after applying the emissions offsets, the project emissions still exceed the Level "B" threshold, an EIR will be required before the project can be considered for action by the reviewing authority.

6.5.7 Objectives and Policies

The following section provides both reason and direction for statements which will influence actions and decisions involving land use, air quality and transportation. As a result of this element, these activities will be guided by an awareness of concerns for impacts on air quality. This will provide opportunities by which new development can become a part of the county and in so doing, contribute to the enhancement of its air quality.

The list of objectives and polices is not all inclusive. The issues and concerns associated with air quality are far too broad and in many cases, too complex. However, the following objectives and policies build upon the information presented not only in this element but in the other documents previously cited in addition to other air quality studies and programs.

The objectives have been arranged by subject matter. Within this framework, a series of policies are presented to achieve realization of the objective. Additional policies may be needed from time to time to respond to the growth dynamics in the County and to address changing requirements of laws affecting air quality.

However, the framework presented here provides a useful strategy for evaluating land use changes and their associated impacts on air quality.

PUBLIC HEALTH

OBJECTIVE AQ-1 To protect and improve the County's air quality in accordance with federal and state clean air laws in order to: (1) safeguard human health, and (2) minimize crop, plant and property damage.

POLICIES AQ-1a The County shall require builders/developers to limit fireplace installations in new development to low-emitting fireplaces conforming to a maximum emission limit of 7.5 grams per hour of total particulate matter by being equipped with a EPA certified insert or by being individually certified to meet the above emission standard.

AQ-1b The County will encourage the development of local programs to minimize emissions from residential wood burning.

AQ-1c The County will work with the AQMD to develop standards to minimize exposure of the public to toxic air pollutant emissions and noxious odors from industrial, manufacturing and processing facilities.

AQ-1d The County shall require residential development projects and projects categorized as sensitive receptors to be located an adequate distance from existing and potential sources of toxic emissions such as freeways, major arterial, industrial sites and hazardous material locations.

AQ-1e The County shall require new air pollution point sources such as, but not limited to, industrial, manufacturing and processing facilities to be located an adequate distance from residential areas and other sensitive receptors.

REGULATORY ACKNOWLEDGMENT/ENVIRONMENTAL ASSESSMENT

OBJECTIVE AQ-2 To meet the requirements of the: (1) Federal Clean Air Act, and (2) the California Clean Air Act as soon as feasible.

POLICIES AQ-2a The County will cooperate with the AQMD, the California Air Resources Board (CARB) and the Regional Transportation Planning Agency in implementing programs designed to comply with provisions of federal and state Clean Air Acts, the County's Air Quality Attainment Plan and its Congestion Management Program.

AQ-2b The County will work to accurately determine and fairly mitigate the local and regional air quality impacts of projects proposed in the unincorporated portions of Shasta County.

AQ-2c Land use decisions, where feasible, should contribute to the improvement of air quality. New projects shall be required to reduce their respective air quality impacts to below levels of significance, or proceed as indicated in Policy AQ-2e.

AQ-2d Shasta County shall ensure that air quality impacts identified during CEQA review are: (1) consistently and fairly mitigated, and (2) mitigation measures are feasible.

AQ-2e Shasta County will cooperate with the AQMD in assuring that new projects with stationary sources of emissions of non-attainment pollutants or their precursors that exceed 25 tons per year shall provide appropriate emission offsets. A comparable program which offsets indirect emissions of these pollutants exceeding 25 tons per year from development projects shall also be utilized to mitigate air pollution impacts. An Environmental Impact Report will be required for all projects that have unmitigated emissions of non-attainment pollutants exceeding 25 tons per year.

AQ-2f Shasta County shall require appropriate Standard Mitigation Measures and Best Available Mitigation Measures on all discretionary land use applications as recommended by the AQMD in order to mitigate both direct and indirect emissions of non-attainment pollutants.

AQ-2g Significance thresholds as proposed by the AQMD for emissions shall be utilized when appropriate for: (1) Reactive Organic Gases (ROG) and Oxides of Nitrogen (NOx), both of which are precursors of ozone, and (2) inhalable particulate matter (PM_{10}) in determining mitigation of air quality impacts.

AQ-2h Shasta County shall evaluate AQMD data annually to determine if the air quality impacts of development projects that may be insignificant by themselves, are cumulatively significant.

AQ-2i The County, in cooperation with the cities of Redding, Anderson and Shasta Lake and the AQMD, should develop an air quality impact analysis program to annually monitor and report the cumulative emissions from all new discretionary permits. This process will aid decision makers in implementing effective and equitable mitigation measures.

AQ-2j The County shall work toward measures to reduce particulate emissions from construction, grading, excavation and demolition to the maximum extent feasible.

LAND USE/TRANSPORTATION/AIR QUALITY

OBJECTIVE AQ-3 To integrate air quality, land use, housing, transportation and energy planning efforts to achieve the most efficient use of public resources and to create a healthier and more livable environment through reductions in air pollution contaminants.

POLICIES	AQ-3a	The County shall consider potential air quality impacts when planning the land uses and transportation systems needed to accommodate expected growth.
	AQ-3b	The County shall work towards creating a land use pattern that encourages people to walk, bicycle, or use public transit for a significant number of their daily trips.
	AQ-3c	The County shall encourage projects proposing pedestrian or transit oriented designs at suitable locations.
	AQ-3d	The County shall work to preserve and enhance existing neighborhood and commercial districts having transit-oriented and pedestrian-oriented designs.
	AQ-3e	The County shall encourage the development of pedestrian-oriented shopping areas within walking distance of residential neighborhoods.
	AQ-3f	Existing town centers and rural community centers should be recognized among the primary pedestrian-oriented commercial and service centers as major contributors in promoting air quality goals in the unincorporated portions of the County.
	AQ-3g	The County will encourage mixed use developments at appropriate locations that provide commercial services such as day care centers, restaurants, banks and stores near employment centers.
	AQ-3h	The County will encourage higher residential densities in areas served by the full range of urban services.
	AQ-3i	The County will encourage infill of vacant parcels in town centers and rural community centers through promotion of such concepts as mixed land use and planned developments particularly where they have the potential to contribute to reducing significant adverse air quality impacts and not adversely affect existing development.
	AQ-3j	The County will encourage infill and redevelopment projects within urban and suburban areas that will improve the effectiveness of the transit system and not adversely affect existing development.
OBJECTIVE	AQ-4	To reduce traffic congestion, vehicle trips, vehicle miles traveled and increase average vehicle ridership through more efficient use of infrastructure and support for trip reduction programs.
POLICIES	AQ-4a	The AQMD's Transportation Control Measures, in conjunction with the County's Congestion Management Plan, may be used as a basis and guide for: (1) developing effective, employer-based air pollution control programs, and (2) implementing transportation planning projects.

AQ-4b All County proposals and programs for transportation improvement projects to be included in regional transportation plans shall be consistent with the air quality objectives and policies of the General Plan.

AQ-4c The County's development standards shall require the paving of roads as a part of new development permits to the extent necessary to meet access and air quality objectives. These requirements shall be designed to help mitigate potentially significant adverse air quality impacts created by particulate emissions on both an individual and cumulative basis.

AQ-4d The County will encourage and publicize the use of public transit; ridesharing and van pooling; shortened and combined motor vehicle trips for work, shopping and services; use of bicycles; "pedestrian friendly" design criteria and walking.

AQ-4e The County will work with local transit providers and CalTrans to plan park and ride lots at suitable locations servicing long distance and local commuters.

AQ-4f The County should work toward development of plans for multi-modal transfer sites that incorporate auto parking areas, bike parking, transit, pedestrian and bicycle paths, and park and ride pick-up points.

AQ-4g The County shall consult as appropriate with transit providers to determine potentially significant project impacts on long range transit plans to ensure that impacts are adequately mitigated.

AQ-4h The County will work with CalTrans and the Regional Transportation Planning Agency to minimize the air quality, mobility and social impacts of large scale transportation projects on existing neighborhoods and communities.

COORDINATION/COOPERATION

OBJECTIVE AQ-5 To coordinate the County's air quality program with regional programs as well as those of other local agencies.

POLICIES AQ-5a Shasta County will work together with its incorporated cities plus other affected agencies to coordinate air quality programs and implementation measures to address mutual air quality and transportation related issues of local and/or regional significance.

AQ-5b The Planning Division will consult with the AQMD, where appropriate, when conducting CEQA reviews for all discretionary development applications.

SITE DESIGN

OBJECTIVE	AQ-6	To promote site designs that encourage walking, cycling and transit use.
POLICIES	AQ-6a	The County shall encourage project sites designed to increase the convenience, safety and comfort of people using transit, walking or cycling.
	AQ-6b	The County shall review all subdivision street and lot designs, commercial site plans and multi-family site plans to identify design changes that can improve access by transit, bicycle or walking.

PUBLIC EDUCATION

OBJECTIVE	AQ-7	To educate the public on the impact of individual transportation, lifestyle and land use decisions on air quality.
POLICY	AQ-7a	The County shall work to improve the public's understanding of the interrelationships between land use, transportation and air quality.

ENERGY

OBJECTIVE	AQ-8	To reduce emissions related to energy consumption and area sources.
POLICIES	AQ-8a	The County will encourage new development projects to reduce air quality impacts from area sources and energy consumption requirements for heating and cooling.
	AQ-8b	The County will encourage use of energy conservation features and low-emission equipment for all new residential and commercial development.

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6.6 WATER RESOURCES AND WATER QUALITY

6.6.1 Introduction

How water resources are planned and used in Shasta County are key to both regional, as well as statewide water issues. For this reason, water resource issues are important to each of the three element groups: Public Safety, Resources and Community Development. Flooding and dam inundation are discussed in the Public Safety Group. Water supply for domestic purposes is discussed in the Community Development Group and in the study entitled **Water Use and Wastewater Treatment in Shasta County** contained in the background reports to the General Plan. The impacts of human activities on the availability and quality of water in Shasta County are the subjects of this element.

This element contains a discussion of water resources and water quality as required by the state mandated Conservation and Open-Space Elements.

Under the Conservation Element, state law requires:

> A conservation element for the conservation, development and utilization of natural resources including water and its hydraulic force . . . (and) rivers and other waters . . . The conservation element may also cover: . . . (3) Preservation and control of the pollution of streams and other waters . . . (5) Prevention, control and correction of the erosion of soils, beaches, and (6) Protection of watersheds (Government Code Section 65302(d))

Under the Open-Space Element, water resources are designated as open-spaces when considered as any one of the following:

- Open-space for the preservation of natural resources including ... rivers, streams, bays, and estuaries; ...lakeshores, banks of rivers and streams, and watershed lands; (and)

- Open-space for the managed production of resources including ... areas required for recharge of ground water basins, bays, estuaries, marshes, and rivers and streams which are important for the management of commercial fisheries..." (Government Code Section 65560(b).)

Findings

6.6.2 Water Supply

The majority of the water available for use in Shasta County is collected in the mountainous regions of the County. Streams, creeks, and rivers carry these surface waters to lower elevations, where a portion is eventually stored in lakes, reservoirs, and groundwater basins. Federally owned and Central Valley Project (CVP) managed Whiskeytown Reservoir and Shasta Lake are major surface water storage facilities in Shasta County.

The U.S. Bureau of Reclamation, at the time of the construction of Shasta and Whiskeytown Dams, acquired substantial appropriative rights from the State. The Bureau then entered into contracts for the sale of that Central Valley Project water to service agencies in Shasta County and elsewhere. There are currently 14 public agencies and private parties in Shasta County contracting for CVP water. These contracts cover approximately 253,000 acre feet of water (see Table PF-1 in the Public Facilities Element). However, there is presently no comprehensive water resource management plan for the County.

Two major groundwater basins within the County, the Redding and Fall River Valley basins, have been identified as significant sources of groundwater. In addition, volcanic and alluvial soils that contain groundwater, known as water bearing soils, are located in the Northeast, Lassen, Eastern Forest, and portions of the Eastern Upland and possibly Western Upland planning areas. Water bearing soils provide most, if not all of the water used by existing development in these areas. Unlike geographically definable groundwater basins, however, the location and amount of water found in alluvial and volcanic soils is difficult to quantify.

The cited water use and wastewater treatment report contains an extensive discussion of the surface and groundwater resources of Shasta County. A major conclusion of this discussion is that the water resources of Shasta County are more than adequate to meet its existing and future needs. The problem is that these resources are not uniformly distributed throughout the County. This fact has major implications for the geographic distribution of future growth, as discussed in the Community Development Group.

Another important finding of this study is the lack of precise, quantifiable data on the groundwater resources of the County, including the Redding and Fall River Valley groundwater basins. Safe yields, the maximum quantities of water that can be continuously withdrawn from a groundwater basin without adverse effect, on these and other groundwater basins, are unknown. This has implications for the process by which water is stored in these basins. Further discussion of these groundwater basins is found in the Public Facilities Element.

Groundwater basins and water bearing soils are recharged (replenished) by the natural process of percolation. This is a process whereby precipitation and percolating stream flow collects in a water table by filtration through the soil. Natural features are essential to groundwater recharge, particularly floodplains and streams that pass over gravel or other porous materials. The flat agricultural lands of the Sacramento River Valley and the Fall River Valley are the most significant areas for this process in Shasta County. It is important that these types of features are protected so that water transfer to ground basins is maintained. Preservation of natural recharge systems is particularly important for Shasta County as there are no human processes to augment them. In many counties where urbanization is widespread, groundwater bodies are artificially recharged by using water from reservoirs. Shasta County has not experienced a level of growth and development resulting in groundwater overdrafting, and therefore artificial groundwater recharge is not justified.

6.6.3 Water Quality

For the most part, surface water quality in the County is good, as is indicated by fish populations and recreational fishing activities. However, a prolonged California drought, which began in 1987, has taken its toll on these indicator fishery resources, along with certain man-caused water quality problems.

Potential hazards to surface water quality include the following non-point pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas and warm water drainage discharges into cold water streams. The most critical period for surface water quality is following a rainstorm which produces significant amount of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when streams flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter and organic matter associated with such run-off, heavy metals such as copper, zinc and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban storm water runoff was managed as a non-point discharge under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid 1980's. However, since then, the federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source subject to NPDES permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Along the Sacramento River, chemical and physical water quality is usually within desirable limits for most uses, although quality tends to deteriorate during periods of heavy runoff. Biochemical oxygen demand (BOD) in the river rarely exceeds the 2.5 mg/l desirable limit for domestic uses.[1] High coliform (bacteria) counts are sometimes recorded, however, thus requiring filtration and chlorination of water prior to drinking.

Water quality in the lower Sacramento River for domestic use is adversely affected by high levels of storm discharged turbidity. Water quality impacts on lower Sacramento River aquatic life include elevated levels of dioxin and elevated heavy metal levels resulting from undiluted acid mine drainage (AMD) from old copper mines located west of the Shasta/Keswick Dam area. The principal source of Sacramento River heavy metal contamination is from runoff from the Iron Mountain Mine complex from Spring Creek. Anadromous fish that migrate beyond Cottonwood Creek run the risk of acid mine poisoning from the Spring Creek drainage (1). Dioxin is believed to have resulted from discharges from area wood products mills and pose a potential health threat if River contaminated fish are consumed beyond State recommended quantities. (2)

The Sacramento River is one of the County's (and the State of California's) most important natural resources and opportunities to encourage or promote improving water quality conditions should be strongly supported and integrated with associated planning, recreation improvement and enhancement activities whenever possible.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

The quality of water in underground basins and water-bearing soils is considered generally good throughout most of Shasta County. As these basins or soils are the primary sources of water in the rural upland areas of the County, it is very important to prevent contamination. A potential hazard to groundwater quality involves the concentration of nitrates and dissolved solids from agricultural practices, and septic tank failures. Several small pockets are found in the eastern portions of Fall River Valley where groundwater testing shows elevated levels of nitrates. Also, several areas within the Eastern Upland planning area contain potential groundwater quality and quantity limitations. These areas are discussed in greater detail in the Public Facilities Element.

The ability of soils to support septic tanks or on-site wastewater treatment systems is generally severely limited in Shasta County, particularly on older valley terrace soils and certain loosely confined volcanic soils in the eastern portions of the County. Septic tank failures have occurred in Shasta County, but the magnitude of this problem is largely unknown. While the County has adopted more stringent standards regarding their use several times during the last decade, additional study and understanding of the cumulative impacts of large scale use of septic systems in high rainfall and poor soil areas needs to occur. Once the long-term septic capability of an area is understood, it can provide an important basis for setting land use densities that assure protection of water quality.

6.6.4 Objective

W-1 Protection of the surface and groundwater resources so that all County residents, both now and in the future, have reasonable assurances that an adequate quantity and quality of water exists.

6.6.5 Policies

W-a Sedimentation and erosion from development shall be minimized through grading and hillside development ordinances and other implementation mechanisms as adopted by the County.

W-b Septic systems, waste disposal sites, and other sources of hazardous or polluting materials shall be designed to prevent contamination to streams, creeks, rivers, reservoirs, or groundwater basins in accordance with standards adopted by the County.

W-c All proposed land divisions and developments in Shasta County shall have an adequate water supply, from a quantity and a quality standpoint, for the planned uses. Furthermore, the potential adverse impacts on the existing reasonable and beneficial uses of utilizing that same water supply should not be significant. Project proponents shall submit data and reports which demonstrate that these criteria can be met. In the case of land divisions, the reports shall be submitted to the County for review and acceptance prior to a completeness determination of a tentative map. This policy will not apply to developments in special districts which have committed and documented, in writing, the ability to provide the needed water supply.

W-d The potential for cumulative water quality impacts resulting from widespread use of septic systems in poorly suited soil areas shall be periodically evaluated for the need to provide greater monitoring and possible changes to applicable standards.

W-e The Shasta County Water Agency should encourage and promote interagency water planning efforts within the County.

W-f The County shall encourage and participate in interagency planning efforts to protect and enhance stream and river water quality.

Footnotes:

1. Sacramento River Water Quality and Biology (Keswick Dam to Verona) - A Literature Review, California Department of Water Resources, 1986, pg. 6

2. California Code of Regulations, Title 14, Fishing Regulations, 1991

6.7 FISH AND WILDLIFE HABITAT

6.7.1 Introduction

The objectives and policies contained in this element address the need to preserve unique and important aquatic, fish and wildlife habitats and plant communities for their biological resource and ecological values, as well as for their direct and indirect benefits to the citizens of Shasta County. The Fish and Wildlife Element incorporates requirements from the state mandated Conservation and Open Space Elements found in Government Code Sections 65302(d) and 65560, respectively. Passages from the codes dealing with fish and wildlife resources are quoted below:

> A conservation element for the conservation, development and utilization of natural resources including . . . fisheries, wildlife, . . . and other natural resources . . . . (Government Code Section 65302(d)).

> Open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitats for fish and wildlife species; (and) areas required for ecologic and other scientific study purposes . . . (Government Code Section 65560(b)(1).)

6.7.2 Findings

Viable and healthy fish and wildlife habitats and plant communities contribute significantly to aesthetic enjoyment, County based recreation income and scientific research. The degree to which this viability is maintained is one indicator of how well we are managing the impacts caused by our ever growing human population. Natural habitat areas sufficient to maintain species diversity and which allow necessary corridors for seasonal species migration are also important to the preservation of ecological balances and environmental quality.

Important wildlife habitats in Shasta County include ten deer winter ranges which support migratory deer herds as well as other associated flora and fauna species; a key oak-woodland habitat in the Oak Run-Whitmore area; numerous riparian (streamside) communities; and wetland habitats associated with Big Lake, Fall River and the Sacramento River corridor in the Sacramento Valley. The upper Sacramento River habitat corridor above Shasta Lake is another important wildlife habitat area. It is expected to gradually recover from the River's near "biological sterilization" which occurred from the Southern Pacific Railroad's toxic spill into the River during July, 1991. An estimated 25 animal species were subjected to significant population declines as a result of the spill and recovery of the River's ecosystem is expected to take more than 10 years.(1)

In 1984 the County adopted a General Plan that included three endangered and seven rare animal species known to inhabit Shasta County. At that time, endangered species in Shasta County included the Southern bald eagle, the American peregrine falcon, and the Bull trout while the seven species classified as rare included the wolverine, the Shasta salamander, the Sierra Nevada red fox, the rough sculpin, the Shasta crayfish, the greater sandhill crane, and the Swanson's hawk. One rare plant specie, Orcuttia tenuis, was also found in Shasta County.

By 1991, Shasta County's list of endangered and threatened species had increased to 14 animals and one plant species. Eight species were classified as endangered and another seven were classified as threatened. Table FW-1 provides a list of these species and indicates their respective status under both the state and federal endangered species law. A brief description of the status classification system is included in Table FW-1.

In general, no improvements in the status of any 1984 listed species have occurred. The greatest species declines during the 1980's occurred to populations of Winter-run chinook salmon and the Bank swallow. Both of these species, which are highly dependent upon the habitat quality of the Sacramento River, were not listed until after 1987.

The many rivers, creeks, and lakes in Shasta County provide habitat for numerous fish species. The Fall, Pit, and McCloud Rivers support large populations of rainbow and brown trout, as do Burney, Hat, and Lava Creeks, and Baum, Crystal and Eastman Lakes. The Sacramento River is famous for its large salmon and steelhead fisheries, plus excellent trout fisheries above and below Shasta Dam. However, these anadromous fisheries have been the subject of significantly reduced numbers during the 1980's. The impacts on the upper Sacramento River resulting from the Southern Pacific toxic spill have already been mentioned. Other important game fish species found in Shasta County waters include black bass, crappie, blue gill, and catfish.

6.7.3 Resources by Planning Area

The following section briefly discuses the critical wildlife resources in each of the County's ten (10) planning areas. The data was gathered by the California Department of Fish and Game.

Sacramento Canyon

Within this planning area lies the 30,000 acre Sacramento River Canyon Deer Winter Range located along the west side of Interstate 5 in the Sacramento River Canyon. Peak population in December is approximately 1,500 deer. Black bear are also abundant in this area, and intensive development has and will continue to result in bear depredation problems. Bald eagle nests, and Shasta salamander habitats are also found in this region, particularly in the southern portions and around Shasta Lake. Fisheries in Shasta Lake provide a major recreational resource, but fish populations and recreational use are diminished during periods of severe drawdowns. Before the July, 1991 spill of toxic pesticides, the Sacramento River above Lake Shasta provided a premier trout fishery and associated food-chain support to water-oriented bird raptors and mammals.

Northwest Forest

On the McCloud River, where the Department of Fish and Game is attempting to reintroduce the species, Bald eagle nests and Shasta salamander habitats occur in the southern portions of this planning area, primarily in the vicinity of Shasta Lake, and the endangered Bull trout may be found along reaches of the McCloud River. Several habitat areas for the Northern Spotted Owl are identified in remote timbered areas in this planning area (2).

TABLE FW-1

LISTED THREATENED AND ENDANGERED ANIMAL AND PLANT SPECIES

SHASTA COUNTY - 1991

	Specie Name (Scientific Name)	General Habitat	Present Status CA	US
A.	Animal Species			
1.	Sierra Nevada red fox (Vulpes vulpes necator)	subalpine and alpine	T	C
2.	Wolverine (Gulo gulo)	variable uplands	T	C
3.	Bald Eagle (Haliaeetus leucocephalus)	uplands near waterbodies	E	E
4.	American peregrine falcon (Falco peregrinus anatum)	most of County	E	E
5.	Swainson's hawk (Buteo swainsoni)	most of County	T	C
6.	Greater sandhill crane (Grus canadensis tabida)	upland wet meadows and marshes	T	-
7.	Western yellow-billed cuckoo (Coccyzus americanus occidentalis)	Sacramento Valley	E	-
8.	Bank Swallow (Riparia riparia)	Upper Sacramento River	T	-
9.	Shasta salamander (Hydromantes shastae)	near Lake Shasta	T	C
10.	Winter-run chinook salmon (Oncorhynchus tshawytscha)	Sacramento River	E	T
11.	Bull trout (Salvelinus confluentus)	McCloud River	E	C
12.	Rough sculpin (Cottus asperrimus)	Pit River, Hat Creek, Fall River	T	C
13.	Shasta Crayfish (Pacifastacus fortis)	Shasta Creek, Hat Creek, Fall River drainages	E	C
14.	Northern Spotted Owl (Strix occidentalis)	NW Shasta County	-	E
B.	Plant Species			
15.	Orcuttia tenuis (slender Orcutt grass)	Valley vernal pools	E	C

Notes: This table indicates both State and Federal-listed species. Federal listing is determined by the U.S. Fish and Wildlife Service under the Federal Endangered Species Act of 1973. The following status abbreviations apply to both State and Federal listings:

C - Candidate: A native California species is a "candidate" when formally noticed as being under review by the Department of Fish and Game or USFWS to determine whether listing as a threatened or endangered species is warranted.

T - Threatened: A native California species is "threatened" when, although not presently threatened with extinction, it is likely to become an endangered species in the foreseeable future in absence of special protection and management efforts.

- Endangered: A native California species is "endangered" when it is in serious danger of becoming extinct throughout all, or a significant portion of its range due to one or more causes.

Big Bend

The Big Bend planning area contains many excellent trout fishing waters, provides nesting sites for the Southern bald eagle and peregrine falcon. Wolverines have also been sighted in the vicinity of Carberry Flat and on U.S. Forest Service lands north of Bald Mountain and in the Kosk Creek Basin. Portions of two critical wildlife habitats; the Whitmore-Oak Run Critical Wildlife Area and the Lake Britton Deer Winter Range also extend into the Big Bend area from North East Shasta County, and are described in more detail below. Several habitat areas for the Northern Spotted Owl are found in remote timber areas in this planning area.

Eastern Forest

This planning area supports the eastern portions of the Cow Creek Deer Winter Range as described in the Eastern Upland section. In addition, this region provides nesting and foraging areas for the bald eagle and peregrine falcon.

Eastern Upland

The Cow Creek Deer Herd migrates through the Eastern Upland Planning Area from November through mid-April of every year. The entire Cow Creek Deer Winter Range, which covers land in both the Eastern Upland and Eastern Forest Planning Areas, hosts an estimated 7,800 animals and covers over 90,000 acres.

The Whitmore-Oak Run Critical Wildlife Area is perhaps the most diversified habitat in Shasta County, and as such the area supports a wide range of wildlife species including many economically important game species. The area is also a migration corridor and feeding ground for approximately 6,000 black-tailed deer.

Bear, Cow and Battle Creek are among the area's many trout fishing waterways, with salmon and steelhead being most important in the lower reaches. These and the other smaller streams are important as sources for fish spawning gravel recruitment to the Sacramento River..

South Central Region (SCR)

The most ecologically significant community in the SCR area is the riparian woodland association found along the Sacramento River and its tributaries. This plant community provides habitat for many animals and plants. The presence of the riparian woodland association also helps prevent erosion of the Sacramento River banks.

The reach of the Sacramento River in Shasta County is also an important anadromous fish spawning corridor. Many Sacramento River tributaries are also important spawning areas for anadromous fish as well as resident trout, even though some may go dry during the summer. High sustained river flows controlled by operations at Shasta and Keswick Dams, however, scour the river bottom, eroding essential gravel beds and preventing effective spawning on the river bottom. Further, presence of these dams restricts the movement of gravel down river, thus severely limiting supplies to the south. Anadromous fish

populations are also threatened by the removal of riparian vegetation, irrigation diversions, heavy metals from the Spring Creek area, sedimentation from erosion, and changes in water temperatures due to a variety of river uses. Further, bank protection activities, such as rock riprap designed to prevent erosion of alluvial soils, often adversely affects fish and wildlife habitats as well as the natural beauty of the waterway. The combined, or cumulative impacts of lost habitat and habitat quality along the Sacramento River has been responsible for the endangered listing of two species, namely the Winter-run chinook salmon and bank swallow.

In general, any cause for the disruption of watercourse ecosystems will reduce the habitat diversity of the surrounding region. Cumulative impacts of urbanization can have serious adverse impacts on water resources not only of Shasta County but of the entire Sacramento River basin as well. If properly understood and managed, however, it may be possible to provide ample water supplies, protect water quality and fish and wildlife habitat, and still meet the needs of a growing population in the County.

Bald eagle nests are located along the shores of Shasta Lake. The peregrine falcon also inhabits the northern Sacramento Valley, and while it does not nest in the SCR, it is sometimes seen foraging the river.

North East Shasta County

North East Shasta County is extremely rich in wildlife resources. Significant areas identified by CDFG include three deer winter ranges and the Fall River-Big Lake Wetlands.

The three deer winter ranges; the Lake Britton, Cindercone, and Day Bench Ranges, together cover approximately 82,000 acres in the North East Planning Area, and support an estimated 8,600 deer during the winter and spring from mid-October through April.

The Department of Fish and Game (DFG) has expressed concern regarding problems confronting the Day Bench deer herd. Based on a two-year study of deer movement, migration corridors, fall and spring holding areas, summer ranges and seasonal habitat requirements, the DFG has developed land use recommendations for each of the three counties (Shasta, Lassen, Modoc) which support this large herd.

Since the Day Bench area of the North East Shasta Planning Area has experienced a great number of land divisions, the DFG has recommended that no further divisions take place. According to DFG officials, the few remaining large parcels are extremely valuable to deer as they shield deer populations/habitat from the potentially negative impacts of human disturbance.

The General Plan designates the Day Bench area as NH-RB-C, which is Natural Resource Protection-Habitat, combined with a Rural Residential B and the Clustering (C) designation. This designation identifies the critical habitat but permits a rural residential density of one dwelling per 5 acres as long as the proposal is clustered to protect the habitat. While this designation is expected to have some negative impacts on deer migratory patterns and/or habitat quality,

these impacts can be reduced by design measures addressing the size and location of lots created by subdivisions, the siting of structures on lots, and the size and placement of fencing and other barriers. Design measures appropriate to development and subdivision proposals are best determined on a case by case basis in which the project proponent works closely with the Department of Fish and Game. Particular attention should be given to the clustering of dwelling units on small lots so that large lots may be created and kept undeveloped for habitat purposes.

The Fall River-Big Lake Wetlands supports numerous springs which eventually give rise to Big Lake, Tule River, and Little Tule River, all of which converge to form Fall River. These waterways are lined with riparian vegetation intermixed with meadows and lowland marshes, creating an excellent fish and wildlife habitat. The Fall River Valley itself is Shasta County's most important waterfowl nesting area, providing habitat for over 400 pair of ducks and 135 pair of Canadian Geese annually. Approximately 88 bird species and 67 mammalian species have been identified in this region, and the Fall River itself has been rated as one of the best trout rivers in California, primarily due to exceptional water quality conditions.A wide variety of angling opportunities are available in the North East Planning Area with warm water species in Lake Britton, specially managed wild trout fisheries in the Pit River below Lake Britton and in lower Hat Creek, hatchery trout fisheries in middle and upper Hat Creek, and remote lake fisheries in the Thousand Lakes Wilderness Area, to name a few.

The North East Planning Area also supports populations of the Southern bald eagle and the American osprey. The osprey has been federally designated as a sensitive specie, yet this bird has not been listed as either endangered or threatened in California. A large concentration of osprey nests are located in the northeast region of the planning area surrounding Ahjumawi Lava Springs State Park. Wolverines have also been sighted in the vicinity of Pit River woodland and in the southwest corner of the planning area.

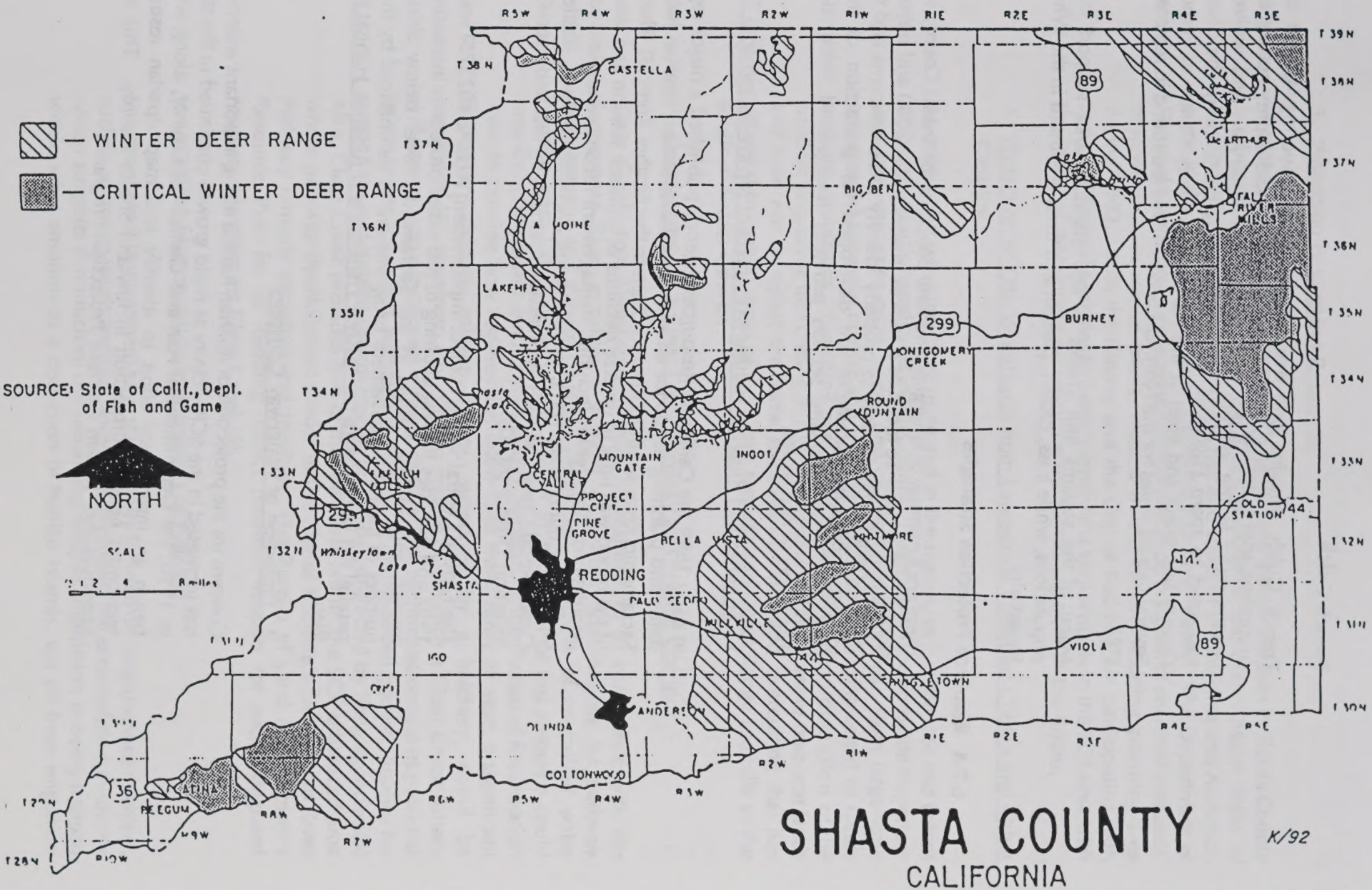
Western Upland

The Western Upland Planning Area contains two zones of the Platina Deer Winter Range. The entire range is approximately 45,000 acres and supports 4,500 deer from October through April. The southeast portion of the range has the highest known concentration of black-tailed deer in Shasta County with an estimated 75 to 100 deer per square mile.

Cottonwood, Begum and Jerusalem Creeks support substantial bass, trout and other fishes. The lower end of Cottonwood Creek supports anadromous fish and contributes fish spawning gravel to the Sacramento River.

FIGURE-FW-1

DEER RANGES



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French Gulch

French Gulch contains one deer winter range covering 47,000 acres and supporting approximately 3,300 deer. Bald eagle and osprey nesting areas have been sighted in the vicinity of Whiskeytown Reservoir, and wolverines are suspected to roam Highland Ridge as well as lands along the Shasta-Trinity County line north and west of the Rural Community Center of French Gulch. Several habitat zones for the Northern Spotted Owl are found in remote timbered area.

Many of the streams and creeks in this planning area support stable trout populations, while bass, catfish, panfish and trout are found in the Whiskeytown Reservoir.

6.7.4 Resource Protection Strategies

There are a number of emerging and new concerns for Shasta County's biological resources that must be faced as it moves towards year 2000 and beyond. It will be important for the County to properly identify these concerns and their issues so that appropriate strategies are developed for protection of the affected resources. The following section provides background information and a discussion of key issues.

1. Fisheries and Riparian Habitat Management for the Sacramento River

In early 1989 the California Resources Agency published a major report on the status and planning needs for anadromous fisheries and riparian habitat on the Sacramento River south of Keswick Dam to the Feather River.(3) The main focus of the report was how to reverse declines of chinook salmon and steelhead trout populations. This report included management recommendations for a number of Shasta County waterways, including the Sacramento River, Battle, Clear and Cottonwood Creeks, as well as diversion methods by the Anderson-Cottonwood Irrigation District (ACID).

The Federal Central Valley Project Improvement Act (PL 102575) was enacted in 1992 and provides for restructuring of the water project to increasingly account for fish and wildlife habitat in the Sacramento River below Shasta Lake. A number of habitat improvement programs are to be financed by the Act which parallel the Upper Sacramento River Fisheries and Riparian Habitat Management Plan.

2. Protection of Waterway Corridors

Concern for the protection of riparian habitat along important waterway corridors has increased in the SCR vicinity as rapid growth continued in the planning area. In 1990, the Department of Fish and Game, the County, along with the cities, began an interagency effort to identify and map riparian resources of key waterways needing protection in lowland Shasta County. This effort became known as the "Stream Corridor Protection Program".

3. Protection of Wetland Resources

Wetlands contain high value wildlife habitat and their protection in Shasta County is of growing importance as the area's population expands. Major areas of important wetland resource include east and south of the Redding and Anderson areas in the SCR planning area and in the Fall River Valley. The Department of Fish and Game began a mapping and identification program of seasonal wetlands, otherwise called vernal pools, located in the eastern Redding planning area during 1992. Both the County and the City of Redding are participating with State and Federal agencies to better identify the vernal pools in the SCR area with the intent of developing an areawide mitigation program in the future.

4. Protection of Oak Woodlands from Large-scale Firewood Cutting and Other Clearing

As population pressures have increased in the region, so has the rate and extent of the loss of oak woodlands in the County. These woodlands provide important food and shelter to many valley and upland animal species. Both large-scale commercial firewood cutting and land development have contributed to losses of these woodlands. Concerns over these losses have led to discussion of the need for regulating tree cutting in rural residential and non-timber resource lands and how not to repeat the same mistakes of hardwood overcutting that has occurred in certain areas of the Sierra Nevada and Coast Range foothills to the south of Shasta County.

5. Development of a Clear Creek Parkway and Habitat Corridor

Clear Creek from Whiskeytown Dam downstream to its confluence with the Sacramento River provides a number of unique opportunities for parkway development and fisheries habitat restoration. Because of controlled water releases from Whiskeytown Dam, proper management of this resource could provide an important anadromous fishery resource. If the Bureau of Reclamation were to provide flow regimes that allow cold water flows all year, a significant Spring-run chinook salmon fishery, supported by a hatchery, could be developed.(4) However, any effort to restore or enhance a Clear Creek fishery will have to occur in concert with efforts to reduce sedimentation and its potential in the lower watershed, particularly in areas of decomposed granite. Studies for water flow and habitat improvements are being conducted by State agencies.(5) Also, Clear Creek provides one of the few areas within the SCR urbanized area where parkway development similar to the City of Redding's Sacramento River Parkway remains attractive and feasible. The Bureau of Land Management's Resource Plan for its Redding district provides support for such integrated resource planning for Clear Creek.(6)

6. Avoiding Fragmentation and Isolation of Habitats

Studies of wildlife movement have traditionally focused on long-distance travelers, such as migratory birds and fish. However, biologists are accumulating evidence which suggests that much of our remaining wildlife population is being trapped within what amounts to a collection of habitat islands, cut off from migration

routes and historic range patterns by roads, fences, dams, buildings, agricultural fields, clear-cut and other human activities. Recognition of this "island" effect is one of the principles used to define areas for migratory deer herds in the General Plan. Avoidance of habitat fragmentation and isolation needs to be recognized and expanded to include other habitat planning efforts, as well.

7. Restoration of Middle Creek

Middle Creek is an important seasonal tributary to the Sacramento River just upstream from the City of Redding and below Keswick Dam. However, the Middle Creek drainage basin, which contains a large area with very steep slopes and decomposed granite soils, has been subject to much increased development pressure since the mid to later 1980's. As a result of poor erosion control practices during and after development, Middle Creek has been subjected to large volumes of sedimentation which have greatly reduced this stream's importance as a key spawning stream for Sacramento River trout. Sediment from Middle Creek is now threatening the Sacramento River, itself, and, although efforts have been made to contain some of the sedimentation, much greater effort will be needed in restoring this basin and the Middle Creek fishery.

8. Rivers and Streams with Wild and Scenic River Characteristics

The Bureau of Land Management has identified a number of Shasta County rivers and streams that possess the characteristics required for federal wild and scenic rivers.(7) Although these waterways were identified because of their relationship to BLM lands, acknowledgement of their habitat values is important to the Fish and Wildlife Element. These identified waterways include the following reaches:

- Battle Creek: Ponderosa Way Bridge to mouth.
- Beegum Creek: Source to confluence of Middle Fork Cottonwood Creek.
- Clear Creek: Whiskeytown Dam to Clear Creek Road Bridge.
- North Fork Cottonwood Creek: From Platina Road crossing upstream for ten miles.
- Middle Fork Cottonwood Creek: National Forest boundary downstream to Platina Road crossing near Hundred Dollar Gulch.
- Sacramento River: Balls Ferry Bridge downstream to Sevenmile Creek in Tehama County.

The Shasta-Trinity National Forest Resource Management Plan also identifies several Shasta County streams as containing wild and scenic characteristics, including: the Upper and Lower McCloud River and the Upper Sacramento River. (8)

Land use controls within critical wildlife habitat areas are designed to be no more restrictive than necessary to protect the resource.

In all areas designated on the land use maps as Natural Resource Protection-Habitat (N-H), except portions of the Day Bench area, the maximum residential density is indicated on the map. However, if a proponent chooses to cluster development and incorporate other habitat protection features, he may be able to double the density. For example, a developer with 200 acres located in area designated for one dwelling per 40 acres would be able to create 5 parcels if he chooses not to cluster. If he clusters and provides other mitigations that reduce the impacts created by the additional density to the same level of impacts created by the forty acre parcels, he may double his density up to 10 dwellings.

In the portions within the Day Bench area designated N-H-RB-C, a residential density of one dwelling unit per 5 acres is permitted provided that the development is clustered and it incorporates design features that protect the habitat.

6.7.5 Objectives

FW-1 Protection of significant fish, wildlife and vegetation resources.

FW-2 Provide for a balance between wildlife habitat protection and enhancement and the need to manage and use agricultural and timber land resources.

6.7.6 Policies

FW-a Significant wildlife habitat resources, as discussed in the Plan text, when not otherwise classified as Timberland (T), Cropland (A-C), or Grazing (A-G) shall be classified on the General Plan maps as Natural Resources Protection-Habitat (N-H).

In all areas designated N-H, except the Day Bench area, residential units may be permitted at a density of one dwelling unit per the acreage indicated on the land use map. If a project proponent agrees to cluster residential units, up to a 100 percent density bonus may be permitted if the parcels are clustered to the degree necessary to reduce the negative impacts on wildlife habitat to a level that does not exceed the level that would be created by the non-clustering option discussed above. When the clustering option is utilized, the clustered parcels shall be sited to reduce the impacts on critical habitat elements such as wildlife watering sites, mineral springs, key thermal cover areas, roost sites and nest concentrations. The balance of the land shall remain in open space. Modifications to the open space areas shall only be allowed for habitat enhancement and forest management.

In the Day Bench area, designated NH-RB-C, the wildlife habitat is the primary designation, but the RB combining designation also recognizes that rural residential development may be permitted at a maximum density of one dwelling per 5 acres, as long as the residences are clustered. The Clustering (C) designation requires clustering. The residential clustering, along with other habitat protection criteria, is required to the degree necessary to mitigate the impacts that development may have on the habitat to below a level of significance.

Recreation uses may also be conditionally permitted when identified significant adverse impacts on the habitat resource are mitigated.

FW-b Recognition that classification of some fish, wildlife, and vegetation resources designated and used as Timberlands, Croplands or Grazing Lands does, in most cases, protect habitat resources. However, if there is a conflict, the timber or agricultural land use classifications mentioned above shall prevail in a manner consistent with state and federal laws.

FW-c Projects that contain or may impact endangered and/or threatened plant or animal species, as officially designated by the California Fish and Game Commission and/or the U. S. Fish and Wildlife Service, shall be designed or conditioned to avoid any net adverse project impacts on those species.

FW-d The significant river and creekside corridors of Shasta County shall be designated on the General Plan maps The primary purpose of this designation is to protect the riparian habitats from development and from adverse impacts from conflicting resources uses. The purpose is also to encourage open space and recreation (policy OSR-e). Mapping of significant waterway corridors in areas designated as resource protection lands is not required since it is assumed that resource land uses will also act to protect such waterway corridors. Riparian habitat protection along the significant river and creekside corridors, as designated on the plan maps shall be achieved, where appropriate, by the following measures:

- regulation of vegetation removal
- design of grading and road construction
- establishment of a development set-back
- the siting of structures, including clustering.
- recreation plans for the Sacramento River, Clear Creek and other feasible waterway resources.

FW-e Salmon spawning gravel in the following rivers and creeks shall be protected:

Sacramento River: Keswick Dam to Shasta-Tehama County line.

Battle Creek: Mouth to the mouth of South Fork Battle Creek.

Cow Creek: Mouth to:
Powerhouse on South Cow Creek; the mouth of Coal Gulch on Old Cow Creek; the mouth of Dry Clover Creek on Clover Creek; the mouth of Tracy Creek on Oak Run Creek; the mouth of Salt Creek on Little Cow Creek.

Cottonwood Creek: Mouth to west line of Section 6, T.29N., R.5W., M.D.B.& M.

Bear Creek: Mouth to the Highway 44 bridge.

Clear Creek: Mouth to Whiskeytown Dam.

Churn Creek: Mouth to Redding city limits.

Stillwater Creek: Mouth to the Highway 299E bridge.

Olney Creek: Mouth to mouth of Tadpole Creek.

Anderson Creek: Mouth to Interstate 5.

FW-f The County should encourage and support efforts by State and Federal agencies that implement the Upper Sacramento River Fisheries and Riparian Habitat Management Plan.

FW-g The County shall encourage the Department of Fish and Game to prepare periodic biological assessments regarding the overall effectiveness of waterway protection efforts under the Stream Corridor Protection Program.

FW-h The County shall encourage efforts to develop tree protection standards which focus on the County's differing land use types, namely; lowland urban, upland urban, rural residential and resource lands. Urban tree protection standards shall focus on landscaping that promotes energy conservation and design aesthetics, as opposed to preserving native vegetation.

FW-i An interagency plan should be encouraged for developing a parkway and wildlife habitat corridor along Clear Creek. The County should support and encourage planning and non-County funding sources which implement this parkway corridor.

FW-j Efforts to restore the Middle Creek drainage basin shall be supported by the County.

Footnotes:

1. Pers. com. Gary Stacey, DFG, 9-20-91; Also see Natural Resource Damage Assessment Plan, Sacramento River: Cantara Spill, Shasta and Siskiyou Counties, Draft, California Department of Fish and Game, October, 1991.

2. Northern Spotted Owl Draft Environmental Impact Statement (California), Spotted Owl Habitat Areas, United States Forest Service, 1991

3. Upper Sacramento River Fisheries and Riparian Habitat Management Plan, State Resources Agency, January, 1989 (Prepared pursuant SB 1086 - Nielsen)

4. Pers. Com.; Harry Rechtenwald, DFG, 5-16-91

5. Clear Creek Fishery Study, Department of Water Resources, March, 1986

6. Redding Resource Management Plan, Bureau of Land Management, 1991, pg. 3-64.

7. Redding Resource Management Plan, Bureau of Land Management, March, 1991, Appendix A

8. Draft Forest Land and Resource Management Plan, Shasta-Trinity National Forest, February, 1990, page 2-8.

6.8 SCENIC HIGHWAYS

6.8.1 Introduction

The Scenic Highways element is an optional general plan element authorized by Section 65303 of the Government Code. The scenic highway element is intended to establish and protect highways with scenic value, be they State or County roads.

Definitions

The term "scenic highways," as used in this element, refers to any freeway, highway, road, street, boulevard or other vehicular right-of-way which traverses an area of unusual scenic quality as indicated on Figure SH-1. An "official scenic highway" is a scenic highway which has been designated by the State of California, according to a procedures which are administered by the State Department of Transportation (Caltrans).

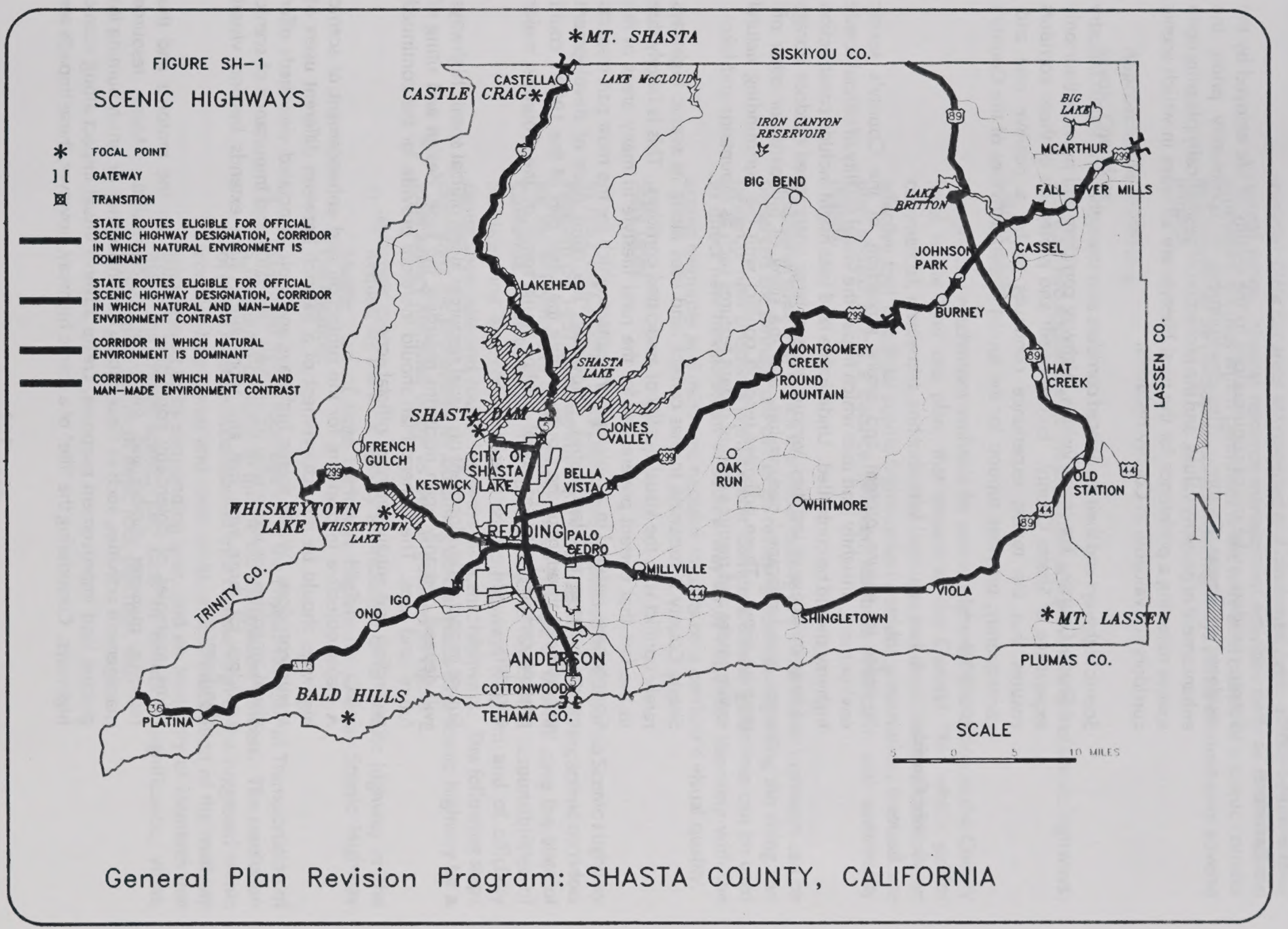
The visible land area outside the actual right-of-way is generally described as the "viewshed" or the "scenic corridor." The corridor encompasses the land easily visible from the highway. Depending on topography and air quality, the physical dimensions of the corridor may vary considerably.

It is the visual quality of the man-made or natural environments within a scenic corridor that are responsible for its scenic value. Commonly, the physical limits of a scenic corridor are broken down into foreground views (zero to one quarter mile) and distant views (over one quarter mile). In addition to distinct foreground and distant views, the visual quality of a scenic corridor is defined by special features, which include:

- Focal points - prominent natural or man-made features which immediately catch the eye.
- Transition areas - locations where the visual environment changes dramatically.
- Gateways - locations which mark the entrance to a community or geographic area.

6.8.2 Findings

Because Shasta County contains two major river valleys, the Sacramento and the Fall, and three major mountain ranges, the Coast, Klamath, and Cascade, its scenic resources are both varied and remarkable. Virtually every highway in Shasta County is a scenic highway. However, some scenic highways are more important than others based on the visual quality of their scenic corridors, the degree to which highways are used, and vulnerability of corridors to degradation of visual quality.



General Plan Revision Program: SHASTA COUNTY, CALIFORNIA

Value of Scenic Corridors

Scenic corridors make major contributions to the quality of life enjoyed by the residents of Shasta County. The development of community pride, the enhancement of property values, and the protection of aesthetically pleasing open spaces reflecting a preference for the rural lifestyle are all ways in which scenic corridors are valuable to County residents.

Scenic highways and their associated corridors also strengthen the tourist industry of Shasta County. For many visitors, highway corridors will provide their only experience of Shasta County. Enhancement and protection of these corridors ensures that the tourist experience continues to be a positive one and, consequently, provides support for the tourist related activities of the County's economy.

Scenic Corridor Issues

In order to ensure present and future protection of the County's scenic environment, unsightly land uses which impair the visual quality of official scenic highway should be controlled. Undesirable land uses might include construction of large buildings or facilities, various types of large unscreened outdoor storage areas, non-landscaped parking lots, and the siting of billboards or other off-premise signs. These activities tend to conflict with the surrounding natural environment and restrict views of distant features such as mountains and lakes.

Shasta County is fortunate in that current land uses along its scenic highways rarely conflict with the visual quality of associated corridors. This is largely due to the fact that current preferences for the rural lifestyle in many areas of the County have resulted in a development pattern which for the most part respects natural features and landscapes. However, the rapid pace of development experienced throughout the County during the latter part of the 1980's could present certain threats to visual quality along some of the County's major corridors.

Future impact of development on visual resources along official scenic highways will depend primarily upon decisions regarding the type, design and siting of future land uses. The General Plan should therefore provide for the continued protection and enhancement of official scenic highways.

A major objective in planning for the protection and enhancement of scenic highways should be the achievement of a balance between different users of scenic corridors. While scenic highways and their associated viewsheds offer visual amenities for those who travel there, the value and importance of scenic corridors for those who live and work along them extends beyond visual significance.

Prime examples of potentially conflicting interests are the motorist and the resource manager (timberland owner or agriculturalist). Many resource management activities, such as clear cutting on timberlands or brush burning for grazing land improvement purposes, create adverse visual impact along scenic highways, Considering the "life" of a scenic highway, however, these impacts are

minimal; clear cut areas are reseeded and blackened fields quickly return to their natural states. Natural resource management activities such as timbering and agriculture are uses which contribute to the long-term beauty of a scenic corridor and should not be precluded along scenic highways based on short-term adverse impacts.

Approaches to Protecting Scenic Corridors

There are two approaches to the protection and enhancement of scenic highways:

County Level

The primary mechanism available for scenic highways protection at the County level is the land use plan, that section of the General Plan which guides commercial, residential, and industrial land uses and densities. In order to be an effective tool in official scenic highway and corridor preservation, the land use plan should reflect a balance between resource protection and community desires.

Additional means by which the visual quality of official scenic highways can be preserved are through use of design review guidelines regarding the siting and design of new structures within scenic corridors. These guidelines can be used to direct new development in such a way as to maximize harmony with the scenic resources and minimize negative impacts on a corridor's visual quality.

State Level

In 1963, the California State Legislature established the California Scenic Highway Program (SB 1467) in recognition of the desirability of preserving scenic corridors for the enjoyment of future generations. Passage of this bill gave the State of California Department of Transportation (CALTRANS) the responsibilities of administering and coordinating a scenic highways program and of officially designation state and county highways as scenic highways. The following steps describing the procedures for obtaining official status as a scenic highway by a local agency are listed below as well as outlined in Figure 2:

1) Request by the local agency for inclusion of its specific highway in The Master Plan of State Highways Eligible for Official Scenic Highway Designation.

2) Submittal by the local agency to the District Director of Transportation of a resolution of intent to initiate the designation process. The resolution of intent must be accompanied by a contour map of the suggested scenic corridor boundaries and route limits, a brief description of the roadway with respect to its surrounding area, and an inventory of elements that make the routes scenic, i.e., facts of historical significance, vistas, topography, stands of trees, rock outcrops, etc.

The specific plan and program guidelines require that the protection program take:

> ... such action as may be necessary to protect the scenic appearance of the scenic corridor, the band of land generally adjacent to the highway right-of-way, including but not limited to 1) regulation of land use and intensity (density) of development; 2) detailed land and site planning; 3) control of outdoor advertising; 4) careful attention to, and control of earthmoving and landscaping; and 5) the design and appearance of structures and equipment." (Streets and Highways Code, Chapter 2, Article 2., Section 261.)

If the local jurisdictions's program is satisfactory, the CALTRANS Director will designate the highway as an official scenic highway. The highway will then be identified by state scenic route signs ("poppy" signs) and included on State maps distributed throughout California. In September, 1981, the portion for Shasta Dam Boulevard west for Lake Boulevard received official state designation as a scenic highway.

6.8.3 Potential Scenic Corridors

Interest has recently been shown for obtaining official scenic highway designation for the stretch of Interstate 5 north of Shasta Lake to the Oregon border. This corridor is one of the most spectacular scenic routes in Northern California. Along this corridor are outstanding views of Shasta Lake, the Sacramento River Canyon, Castle Crags, and Mount Shasta. Continuing efforts may be made to incorporate this segment of I-5 into the State's Master Plan for officially designated highways.

The General Plan Approach

The appropriate approach for official scenic highway corridor protection in Shasta County should incorporate State and County level protection measures. The amount of protection should be tailored to balance the need for scenic corridor protection, based on resource value, with the County's demand for corridor preservation.

As all routes vary in terms of viewshed quality and protection needs, it would be impractical to develop County land use plan policies which address all existing situations, Therefore, at the County level, administrative guidelines should be developed which would direct new development is such a way as to minimize land use conflicts while maximizing potential scenic value along the corridor. The administrative guidelines system should be general enough to apply to any combination of land use and resource characteristic, yet specific enough to provide the degree of protection necessary and desirable for preservation of the scenic corridor. Guidelines should regulate new development along official scenic corridors in terms of allowable land uses and densities, development siting, grading activities, outdoor storage areas, parking lots, structural design and landscaping. Outdoor advertising guidelines, both on and off-premise, should also be developed and applied where necessary for scenic corridor protection.

Requests to the State Department of Transportation for official designation of state scenic highways should be submitted when necessary and desired by the County.

6.8.4 Objectives

SH-1 Protection of the natural scenery along the official scenic highways of Shasta County from new development which would diminish the aesthetic value of the scenic corridor.

SH-2 New development along scenic corridors of the official scenic highway should be designed to relate to the dominant character of the corridor (natural or natural and man-made contrast) or of a particular segment of the corridor. Relationships shall be achieved in part through regulations concerning building form, site location, and density of new development.

SH-3 Recognition that the management practices of agriculture, timber and other resource-based industries, which may cause some degradation of the visual quality of the scenic corridor, are inevitable but their impacts are temporary.

6.8.5 Policies

SH-a To protect the value of the natural and scenic character of the official scenic highway corridors and the County gateways dominated by the natural environment, the following provisions, along with the County development standards, shall govern new development:

- setback requirements
- regulations of building form, material and color
- landscaping with native vegetation, where possible
- minimizing grading and cut and fill activities
- requiring use of adequate erosion and sediment control programs
- siting of new structures to minimize visual impacts from highway
- regulation of the type, size, and location of advertising signs
- utility lines shall be underground wherever possible; where undergrounding is not practical, lines should be sited in a manner which minimizes their visual intrusion.

SH-b The type, size, design and placement of signs within an official corridor shall be compatible with the visual character of the immediate surroundings. The County's sign regulations should be redrafted for the following locations:

- timberlands and forest areas
- croplands and grazing lands
- rural community centers
- urban and town centers
- recreational uses

SH-c Official scenic highways should include vista sites, turnouts, restrooms, picnic grounds, travel information and other related facilities/services.

6.9 OPEN SPACE AND RECREATION

6.9.1 Introduction

The open space element is the broadest in scope, except for the land use element, in the General Plan. As defined by Government Code Section 65560(b) "open-space" includes any parcel or area of land or water which is essentially unimproved and designated as such for any one of the following reasons:

- natural resource protection (such as fish and wildlife habitats, rivers, streams and riparian corridors)
- managed production of natural resources (including agricultural and timberlands, mineral extraction areas and fish hatcheries)
- provision of outdoor recreation (camping, hiking, boating)
- assurance of public health and safety (open space along flood plains, steep slopes, or any other such area which threatens the safety of structural development).

The objectives of the open space element have been clearly stated by the State Legislature and are included in Government Code Section 65561:

> ". . . (a) That the preservation of open-space land . . . is necessary not only for the maintenance of the economy of the state, but also for the assurance of the continued availability of land for the production of food and fiber, for the enjoyment of scenic beauty, for recreation and for the use of natural resources; and
>
> (b) That discouraging premature and unnecessary conversion of open-space land to urban uses is a matter of public interest and will be of benefit to urban dwellers because it will discourage noncontiguous development patterns which unnecessarily increase the cost of community services to community residents . . ."

Government Code Section 65303 outlines an optional recreation element designed to show ". . . a comprehensive system of areas and public sites for recreation, including: (1) natural reservations; (2) parks; (3) parkways; (4) beaches; (5) playgrounds; (6) recreational community gardens; and (7) other recreation areas."

Because recreational opportunities in Shasta County are so numerous, the General Plan will approach their discussion in three different ways: recreation as it relates to the County tourist industry, recreation at the community level (local parks and playgrounds), and recreation at the Countywide level.

For a discussion of recreation at the community level, the reader is referred to the Public Facilities Element included in the Community Development Group. The Open-Space and Recreation Element deals with recreation at the Countywide

level and recreation as it relates to the County tourist industry. The Element includes a discussion of the resources and facilities provided by federal, state, and County governments as well as private interests, which are designed to accommodate users from the entire County. Although the General Plan Guidelines allow for a separate recreation element, the discussion of Countywide recreational resources in Shasta County has been incorporated into the Open-Space Element to emphasize the relationship between Open-Space land and recreational uses. As defined by state statute and this General Plan, open-space is a passive land use category, meaning that the use and enjoyment of open-space is derived from the natural character of the land rather than from any man-made improvements to it. Recreation on the other hand, is an active use of open-space land. Recreational areas are essentially open-space lands which are designed to accommodate recreational activities such as hiking, picnicking, or camping. The distinction between recreation and open-space is often a cloudy one, as the two uses frequently overlap. For this reason, these two elements have been combined.

Findings

6.9.2 Open Space Resources

As noted in the Economic Development Element of the General Plan, the economy of Shasta County is comprised of three major industries - timber, tourism, and agriculture - all of which require substantial open space resources, as defined by the Government Code, for their operation. In general terms, these resources may be described as follows:

- timber harvesting
  - public timber lands
  - privately owned timber lands

- tourism
  - federal, state, and county recreation facilities
  - private recreation facilities

- agriculture
  - grazing lands
  - crop lands

Other major open space resources of Shasta County are its rivers and creeks and their associated riparian corridors and floodplains and critical wildlife habitats. The value and importance of these resources cannot be over-emphasized and lies in their potential use for many different purposes, including:

- riparian and other habitat protection
- floodplain management
- community design, and
- recreation.

TABLE OSR-1

SHASTA COUNTY OPEN SPACE INVENTORY

PUBLIC LAND

Federal

Shasta-Trinity National Forest
Whiskeytown-Shasta-Trinity-National Recreation Area
Lassen National Park
Lassen National Forest
Bureau of Land Management holdings

State

Latour State Forest
McArthur-Burney Falls Memorial State Park
Castle Crags State Park
Ahjumawi Lava Springs State Park
Shasta Historic Park

County

Balls Ferry Park and Fishing Access
Battle Creek Fishing Access
Keswick Lake Fishing Access
French Gulch Park
Hat Creek Park
Lake Britton Fishing Access
Jones Valley Boat Launching Facility
Packers Bay Boat Launching Facility
Redding Island Park and Fishing Access

Regional Serving City Parks

Anderson River Park and Fishing Access (City of Anderson)
Girl Scouts Park (City of Redding)
Lake Redding - Caldwell Memorial Park (City of Redding)
Turtle Bay Regional Park (City of Redding)
Turtle Bay East (City of Redding)

PRIVATE LAND

Privately owned and operated recreational facilities and open-space resources such as resorts, campgrounds, recreational vehicle parks, boat and boating equipment facilities, geologic tours, hunting and fishing guides, and clubs provided by commercial enterprises. Privately owned open-space also includes timber and agricultural lands, floodplains, and land designated for Natural Resource Protection.

OTHER

Heritage Resources

Including National Historic Landmarks, State Points of Historic Interest, areas listed in the California Landmark Series and other areas of significant historic, cultural, or geologic value.

The Pacific Crest Trail

Under the auspices of the United States Forest Service, the Pacific Crest Trail provides access into areas of unique a pristine natural character. The trail winds its way along the Pacific Mountain Ranges from the Canada-Washington border, south to the Mexico-California border. The Pacific Crest Trail covers 154 miles in Shasta County, approximately 2/3 of which is on Forest Service land and the remainder on private land.

Quasi-Public Land

This category includes campgrounds, man-made lakes, day use areas, and fishing access points provided by PG&E or other local utility districts.

Source: Sedway/Cooke

These multi-purpose uses are particularly valuable in the SCR Planning Area, but the anticipated urbanization of parts of this planning area presents a major threat to these resources. In the other planning areas, development presents far less of a threat to these resources, but their value is no less important. For these reasons, the major rivers and creeks of the County are symbolically designated on the General Plan maps to denote the application of policies specified in this and other Plan elements. With respect to this element, these policies address the scenic value of these resources and their recreation potential.

As provided by the Subdivision Map Act, subdivisions fronting along certain of these rivers and creeks must provide reasonable public access to the waterway and must dedicate a public easement along a portion of the bank of the river or creek lying within the subdivision (Government Code sections 66478.4 and 66478.5). In Shasta County, these rivers and creeks are:

- Sacramento River between Keswick and the Shasta-Tehama County line.
- Battle Creek downstream of the Coleman Powerhouse (Fish and Game Code Section 1505).

An inventory of these open space resources is presented in Table OSR-1.

Given that the basic composition of the economy of Shasta County will remain unchanged for at least the foreseeable future, the open space needs of County residents will be adequately met in terms of the amount of the resources per population. The central open space issue in Shasta County is the accessibility of these resources to residents of the urbanized portions of the SCR planning area. Within this area are privately-owned, undeveloped open space areas. As this area becomes more developed, a major portion of these close-in open space resources will be developed which will tend to eliminate methods of access other than paved roadway.

One approach to providing better access is the development of a system of hiking, bicycle, and equestrian trails linking the urbanized areas with open space resources. The development of such a system is discussed under Recreation Resources, below.

Most of the open space resources of Shasta County are federally or state-owned and their management is the responsibility of the appropriate government agency. Open space lands under the jurisdiction of the County are mostly privately owned timber and agricultural lands. Their management for open space purposes will be indirectly accomplished by policies described in the Timber and Agricultural Elements and are primarily intended to maintain the economic value of these resources. Other major open space lands under County jurisdiction include floodplain areas which are subject to policies described in the Flood Protection Element and wildlife habitat areas which are subject to policies described in the Fish and Wildlife Element.

6.9.3 Countywide Recreation Resources

Table OSR-1 shows that federal and state agencies and the private sector are major providers of Countywide recreation facilities in Shasta County, and the role of County government has correspondingly been a limited one. A recreation commission appointed by the Board of Supervisors has been in existence since 1961 and has primarily been responsible for making recommendations to the Board on recreation matters.

In 1982 the County closed its Buckeye Landfill Site located to the north of Redding on lands acquired from the Bureau of Land Management, on condition that the County would develop them as a park upon closing. Although the County has no definite plans for the use of this site, it is likely that its ultimate use will be for recreational purposes.

The only new County recreation project currently in the planning stage involves the proposed Cottonwood Creek Reservoir. Subsequent to its construction, the County would have ten years in which to decide whether to sponsor recreation facilities at this U.S. Corps of Engineer owned and operated reservoir. If the County should decide to proceed with the project, the reservoir facility would be operated on a fee basis, possibly through a concessionaire. An important issue concerning this project is the nature of the surrounding land uses. One option would be to allow intensive recreational residential development, while another option would be to limit development such as has been done in the vicinity of Whiskeytown Reservoir.

The proposed enlargement of Shasta Dam would also have recreation implications for County residents. If this project is developed, an as yet undetermined amount of stream-side or riparian habitat area will be inundated and no longer available for use by County residents. One way of mitigating this impact would be to replace the riparian resources lost in this manner with improvements in the habitats along creeks in the SCR planning area. The proposed enlargement project is now entering a new study phase during which it would be to the County's benefit to request exploration of this impact and mitigations.

6.9.4 Trails

In recognition of their different right-of-way surface requirements, trails are divided into two parts: (a) bicycle and (b) hiking and equestrian. In certain sections, the two elements would share the same right of way. Trails offer one means of increasing accessibility to the open space and recreation resources of Shasta County, and trails are themselves a recreational facility. During the planning process, a considerable amount of interest in multi-purpose trails was expressed by the following organizations located in the SCR Planning Area: Palo Cedro Trails Council, Mountain Gate Trail Riders, Shasta Horseman's United Council, Centerville Community Planning Advisory Committee, and Shasta Wonderland Elite Athletic Team. Given this expression of citizen interest and the very limited resources which County government may devote to recreation development, a practical approach to developing a trail system would be to rely on citizen effort. The organizations listed above could be united under the leadership of the County Recreation Commission to begin the process of developing the trail system.

National Recreation Area Boundary

Major Bicycle Trail

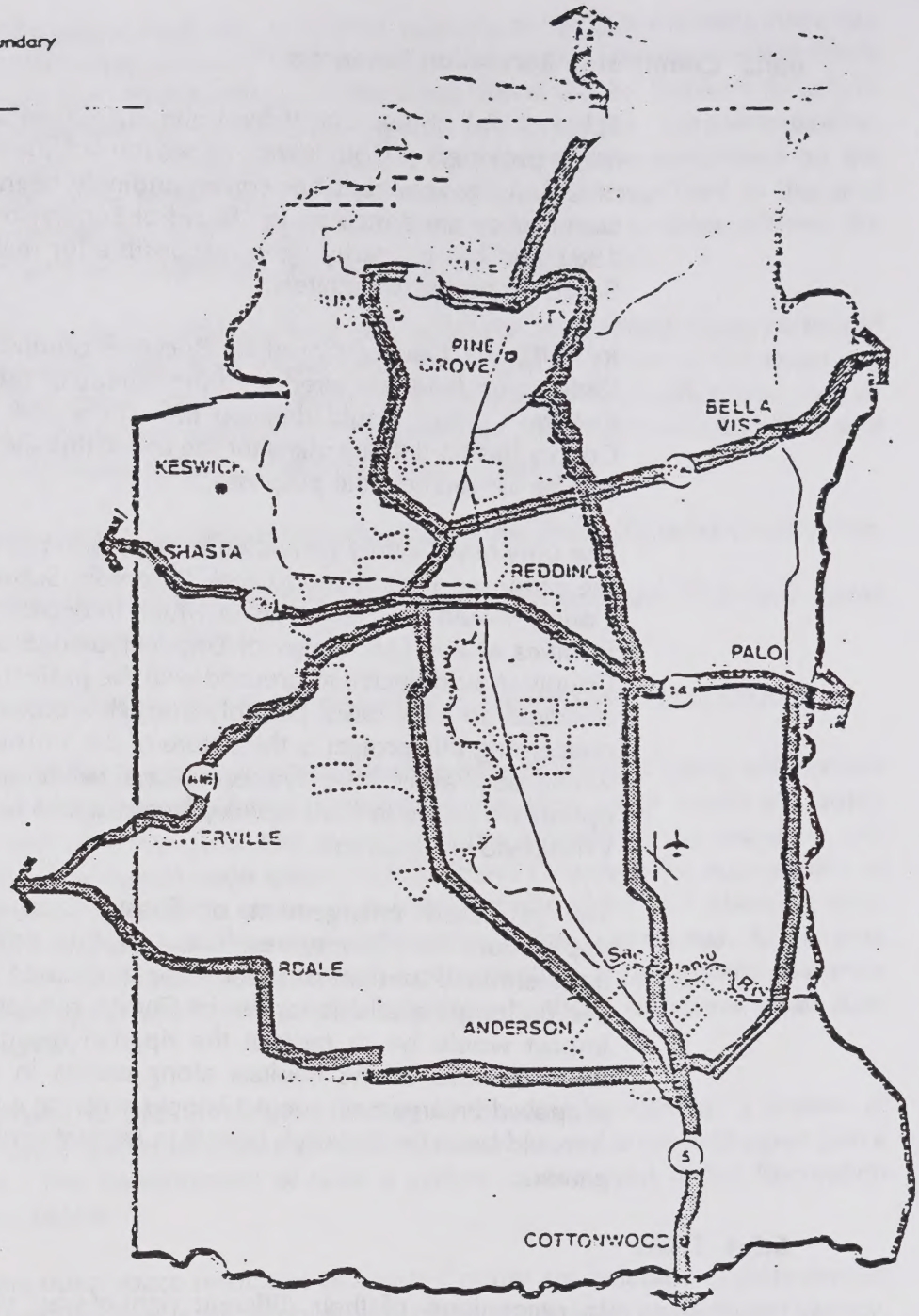


FIGURE OSR-1
Bicycle Trail Policy

South Central Region

General Plan Revision Program: SHASTA COUNTY, CALIFORNIA

SEDWAY/COOKE Urban and Environmental Planners and Designers

0 2 4 miles

It must be recognized that this process will be long-term and will require a tremendous amount of citizen involvement to be successful. Where new subdivision development incorporates a link in this system, the County should exercise its authority under Government Code Section 66477 to require the dedication of an easement in the trial right-of-way. In other privately owned areas securing the trail right-of-way would require a variety of techniques, including purchase, lease, or possibly gift. Public funds available for this purpose will be extremely limited, especially at the County level, although the possibility of passing a special tax to support trail system acquisition costs should not be discounted. Fewer problems would be encountered where the trail system utilizes an existing public right-of-way.

Acquisition and development of a trail system is one problem; maintenance of the system is another. Maintenance costs would be especially significant where the trail system would not use an existing public right-of-way. In the absence of support by its citizens, County government will be unable to make the necessary long-term commitment to maintain the system. The burden of securing support for this commitment will again rest with the citizen sponsors of the trails system.

The bicycle trail exclusively uses public roads, as shown in Figure OSR-1. Where possible, it avoids Interstate 5. It is assumed that bicycles would use the paved, vehicular right-of-way. In the event that funding is available, a parallel bicycle path could be constructed along the links of the system experiencing heavy automobile traffic, such as Highway 273. The bicycle trail system is designed to connect all communities in the SCR planning area and to provide north-south, and east-west circulation.

6.9.5 Tourist Related Recreation Resources

Undeveloped open space, or natural areas contained within national recreation areas, national parks, wilderness areas, and state parks represent the major tourist recreation resources of Shasta County and are extremely important to the County's tourist industry. Development of private and public lands within these resources could potentially visually impact the persons using these resources and thus, their enjoyment.

Examples of adverse visual impacts include cases of poorly sited homes or structures which have not been designed to blend with their surrounding landscape. Highly visible roads have been built on scenically sensitive mountain sides to provide access to new homes sites or residential parcels. In still other cases, public agencies have undertaken construction with little sensitivity to the land or the conservation of natural resources.

In order to protect these tourist and recreation resources and their direct contribution to the County's economy, this element contains policies addressing the development of private and public lands within the recreation areas. Privately owned open space areas or natural features also provide important tourist recreation resources. Some of these areas and features have been developed for commercial recreation purposes; other areas and features could potentially be developed for this purpose. This element also provides policies which recognize the importance and value of these resources.

6.9.6 Objectives

OSR-1 Protection of the open-space and recreation resources of Shasta County for the use and enjoyment by County residents both now and in the future.

OSR-2 Provision of public access to open-space and recreation resources consistent with the need to protect these resources and the rights of private property owners.

6.9.7 Policies

OSR-a Protection of the open space resources under Shasta County jurisdiction shall be achieved primarily through policies recognizing the contributions of these resources to the economy of the County. Specifically, the Timber, Croplands, Grazing, and Small Scale Croplands/Grazing and Natural Resource Protection-Habitat land use designations shall be used for this purpose. Other open space resources generally with no known economic value for timber, croplands, or grazing shall be classified as Natural Resource Protection- Open Space (N-O). The purpose of the N-O classification is to recognize open space values by permitting low density residential development along with the resource uses. Typically, lands classified as N-O are adjacent to major landforms, riparian corridors, habitat areas, etc. Residential densities that do not exceed one dwelling per 20 acres may be permitted. In recognition of their resource or open space value, federally owned lands shall be classified as N-O. Land changed from public to private ownership shall remain in the N-O designation unless an approved General Plan amendment places the property in a more appropriate land use designation.

OSR-b Parks and recreation systems planning, acquisition, development, and operation should be coordinated among city, County, state and federal governments, as well as schools and special districts, and should take advantage of opportunities for linkages between publicly owned parks and publicly owned open-space lands.

OSR-c The quality of the recreation resource values of national recreation areas, national parks, wilderness areas, and state parks shall be protected and maintained by the application of the Natural Resource Protection - Recreation Resource (N-R) land use designation to privately owned lands located within these resources.

When land within a recreation resource area is classified as Timber, Cropland, Grazing, or Mining the N-R classification is not mapped, but is expressed as a policy which overlays these other classifications.

The purpose of the N-R classification is to mitigate any visual impacts which may result from the use of the lands.

If lands so classified are within a rural community center, densities equivalent to Rural Residential A are permitted. Otherwise, residential densities equivalent to Rural Residential B are permitted except for areas that exceed 30% slope the maximum residential density shall be 1 dwelling per 20 acres if within a rural community center and 1 dwelling per 80 acres if not within a rural community center. Residential uses are subject to standards addressing parcel size, siting of structures, removal of natural vegetation, location of access roads, placement of utilities, and other relevant factors designed to mitigate the visual impact of these structures as they are visible by persons using the recreation resources.

OSR-d Existing commercial recreation uses and known potential commercial recreational sites, based on open space and natural features, shall be permitted as shown on the General Plan maps by the symbol R . Other similar commercial recreation facilities, potential or existing, may also be conditionally permitted according to the criteria established in the Community Organization and Development Pattern Element.

OSR-e The significant river and creekside corridors of Shasta County shall be designated on General Plan maps except in those areas designed as A-C, A-G, T or NH. Public access and public easements along the corridors listed below shall be required as provided by the Subdivision Map Act:

- Sacramento River between Keswick and the Shasta- Tehama County line
- Battle Creek downstream of the Coleman Powerhouse.

In all other cases, public access and easements for recreation purposes may be provided if:

- riparian habitat will not be significantly impacted
- public access to the corridor is not available within a reasonable distance from the project. Public access includes, but is not limited to, public road access, hiking trails and public land adjacent to the corridor
- the corridor is located in proximity to urban, town, and rural community centers.

The location and type of public access required shall take into consideration minimizing the likelihood of trespassing across private property and minimizing impacts on private property rights.

6.10 HERITAGE RESOURCES

6.10.1 Introduction

The heritage resources element is an optional general plan element authorized by Section 65303 of the Government Code. This element is intended to identify and protect sites and structures of architectural, historical, archaeological or cultural significance. Due to an abundance of heritage resources located in Shasta County and the interest of County residents in the preservation of these resources, the General Plan includes this optional element.

Findings

6.10.2 Historic Records

Pre-European Contact

While much of the County's post-contact history is known, there is still much to be learned of the Native American culture in Shasta County prior to the arrival of non-native settlers. This type of information is obtainable in a variety of ways, yet those methods are most commonly used are ethnography and archaeology.

As was common practice of many ancient peoples, the Native American groups in Shasta County relied on the oral tradition of record keeping. Thus, much information on these groups known to us today has been obtained through interviews with tribal elders who are able to describe the lives of their ancestors.

A second means of retrieving ancient history is through archaeology, the scientific study of material remains of human life and activities.

Of these two methods, archaeology presents the greatest implications for land use planning.

Development in areas with known or suspected heritage value may result in damage to, or loss of, these fragile resources if measures to preserve them are not implemented. It is therefore important that the General Plan be used as a guideline for the protection of these resources for their inherent cultural, scientific, and aesthetic value.

A primary concern expressed by Native Americans relevant to land use planning involves the preservation of ancient villages and burial grounds. This is particularly true for descendants of the Wintu tribes whose now abandoned villages were once located in the Sacramento River Valley. Today this area is experiencing substantial development pressure. In order to satisfy the desire for cultural preservation as well as the needs and demand of future development, representatives of Native American interests, historians, and interested archaeologists should be allowed to monitor the preliminary development of sites which are known or suspected to contain significant cultural artifacts to determine their significance to cultural heritage. Provisions should also be made whereby valuable artifacts could be professionally excavated and preserved. In addition to villages and burial grounds, such artifacts include stone tool chipping sites,

tools, baskets, and weapons. Several large petroglyph (rock art) sites have also been located in the SCR and Eastern Upland Planning Areas.

Post-European Contact

Post-contact artifacts consist primarily of settlement areas and structures, cemeteries, and mining sites of the gold rush era. Many of these sites are located in the Sacramento River Valley and the Eastern and Western Upland Planning Areas of the County and are usually accessible to the general public.

Opportunities to preserve post-contact historic resources are available through federal and state government protection. The National Register of Historic Places, the California Landmark Series, and State Points of Historic Interest are all means by which resources may be enhanced and maintained. Several historic sites in Shasta County have already been included in these programs and are listed and described in Table HER-1.

6.10.3 Objective

HER-1 Protection of significant prehistoric and historic cultural resources.

6.10.4 Policy

HER-a Development projects in areas of known heritage value shall be designed to minimize degradation of these resources. Where conflicts are unavoidable, mitigation measures which reduce such impacts shall be implemented. Possible mitigation measures may include clustering, buffer or nondisturbance zones, and building siting requirements.

TABLE HER-1

SHASTA COUNTY HERITAGE RESOURCES[1]

NAME	LOCATION	THEME
Afterthought Mine	Highway 299E	EC/IN
Archaeological Site*	Shasta Trinity National Forest	CULT
Archaeological Site*	Lassen National Forest	CULT
Balls Ferry	Balls Ferry Road	EC/IN
Bass Hill	North of Redding	EX/SE
Battle Rock	Castle Crags State Park	MIL
Bells Bridge	Highway 99, Clear Creek	EX/SE
Benton Tract Site*	Redding	CULT
Briggsville	Clear Creek Road	EC/IN
California-Oregon Road	Anderson	EX/SE
Clear Creek	Redding	EC/IN
Cottonwood Historic District*	Cottonwood	ARCH
Cow Creek Petroglyphs*	**	CULT
Dersch Homestead	Anderson	EX/SE
Dersh-Taylor Petroglyphs*	II	CULT
Fall River's First School Site	East of McArthur	SO/ED
Father Rinaldi's Foundation of 1856	Town of Shasta	REL
Fort Crook Site	10 miles NW of Fall River Mills	MIL
Fort Reading Site	Anderson	MIL
French Gulch Historic District	French Gulch	EC/IN
Horse Town	Clear Creek Road	EC/IN
Horseshoe Lake Ranger Station*	Lassen National Park	EX/SE
Igo	Igo	EC/IN
Iron Mountain Mine, Keswick Smelter	NW of Redding	EC/IN
Lake Britton Archaeological District *	**	CULT
Lockhart Ferry	Fall River Mills	EX/SE
Loomis Visitor Center*	Manzanita Lake-Lassen National Forest	SO/ED
McEllroy Military Road Crossing	Highway 299E	EX/SE
Millville	Old 44 Drive	EC/IN
Nobles Pass Route*	Park Highway-Lassen National Park	EX/SE

Old City Hall*	Redding	SO/ED
Olsen Petroglyphs	**	CULT
Park Entrance Station and Residence*	Mineral	EX/SE
Piety Hill	East of Igo	EC/IN
Pine Street School*	Redding	SO/ED
Pioneer Baby's Grave	West of Shasta	EX/SE
Prospect Peak Fire Lookout*	Mineral	EX/SE
Reading Adobe*	Cottonwood	EC/IN
Reading's Bar	Clear Creek Road - Igo	EC/IN
Ried Mine in Old Diggins	Summit City	EC/IN
Shasta State Historic Park	Highway 299, west of Redding	EC/IN
Shasta 47	Sacramento River - Redding	CULT
Shingletown	Highway 44	EC/IN
Southerns Stage Station	Highway 99 - Castella	EC/IN
Squaw Creek Archaeological Site*	**	CULT
Summit Lake Ranger Station*	Mineral	EX/SE
Texas Springs	Texas Springs Road	EC/IN
Tower House District*	Whiskeytown NRA	ECIN
Volta	Manton	EC/IN
Warner Valley Ranger Station*	Mineral	EX/SE
Whiskeytown	Whiskeytown	EX/SE

[1]The 51 heritage resources listed here include resources included in the National Register of Historic Places, the California Historical Landmarks series, or the California Points of Interest program. In addition to the resources listed here are approximately 500 known sites or areas of archaeological significance. The names and locations of these areas are not revealed in order to protect these sensitive resources. This information is on file with the Cultural Resources Section of the California Department of Parks and Recreation.

[2]Theme Code:

ARCH	Architecture	EX/SE	Exploration/Settlement
CULT	Cultural (Aboriginal)	MIL	Military
EC/IN	Economic/Industrial	REL	Religion
SO/ED	Social/Education		

* National Register of Historic Places site.
**Information regarding the location of these resources is on file with the Cultural Resources Section of the California Department of Parks and Recreation.

Source: State of California Department of Parks and Recreation.

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7.3 SHASTA COUNTY HOUSING ELEMENT

Revised Effective June 15, 1993

Prepared by Hulse and Associates, Auburn, California
Under the Direction of
Shasta County Department of Resource Management Planning Division

7.3.1 INTRODUCTION

Under the requirements of state planning law, every city and county in California must prepare a housing element as part of its general plan. The housing element must document the nature of the existing housing stock and existing and projected housing needs. In responding to these requirements, this update profiles Shasta County's existing housing, assesses existing and projected needs, analyzes resources available to meet these needs, reviews governmental and nongovernmental constraints, and establishes goals, policies and programs for the production of affordable housing.

A. AUTHORITY and SCOPE

Government Code Section 65588(a) requires communities to review their housing elements as frequently as appropriate to evaluate progress made implementing the housing element, determine if their goals, objectives and policies are appropriate, and assess how effective the housing element has been toward attaintment of the communities goal. Government Code Section 65588(b) requires the housing element to be revised as appropriate, but not less than every five years, to reflect the results of this periodic review and suggests the review be included in the updated element.

The updated housing element must describe past successful implementation efforts and what has been learned. To the degree possible, the results should be quantified and have qualitative statements where statistics are not available or appropriate. Finally, the reasons for differences between what was projected or planned and what was achieved must be analyzed.

An updated housing element is expected to contain:

1. An evaluation of the existing element (see Section 7.3.5) that:

   a. Evaluates existing goals, policies, objectives, and programs;
   b. Provides an analysis which identifies adequate sites.

2. A new five year planning period that incorporates:

   a. An updated housing needs analysis (see Section 7.3.6);
   b. Housing needs projections which include the community's regional share established by the State Department of Housing and Community Development (see Section 7.3.6);—

c. Goals, policies, objectives, and programs, if revised, which correct a deficiency in stating or meeting objectives of the previous element or to reflect the new needs analysis (see Section 7.3.6 and 7.3.7);

d. An updated site inventory (see Sections 7.3.4, 7.3.6, 7.3.7).

3. An analysis of governmental constraints that hinder development of housing (see Section 7.3.4).

4. An examination of non-governmental constraints (see Section 7.3.4.D).

5. A discussion of energy conservation opportunities (see Sections 7.3.3.C and 7.3.7.V).

6. An identification of special housing needs (see Sections 7.3.3.B and 7.3.7.IV).

7. Strategies to conserve and improve the existing affordable housing stock (see Section 7.3.7.I),

8. Methods to promote equal housing opportunity (see Section 7.3.7.VI).

9. An identification of how the public participated in the revision process (see Section 7.3.1.B).

10. A finding that the housing element is internally consistent with the rest of the Shasta County General Plan (see Section 7.3.8).

Goals, Objectives and Policies

Goals are general statements of purpose that guide policies and specific programs. Shasta County's goals provide for the following:

1. Consistency with state housing goals and legislative intent.

2. Indicate the general direction the County intends to take with respect to meeting its housing responsibilities and resolving identified housing problems.

3. Provide guidance for the County's policies and objectives.

Shasta County's **policies** are statements that cover a range of actions the County intends to take towards attainment of its goals. Policies help guide and maintain consistency in programs that implement the housing element.

Objectives are quantified statements that contain the maximum actual numbers of housing units the County projects can realistically be constructed, rehabilitated, and conserved over a five-year time frame. State law acknowledges that "the total housing needs identified may exceed available resources and the community's ability to satisfy this need within the content of the general plan. Under these circumstances, the quantified objectives need not be identical to the identified

existing housing needs but should establish the maximum number of housing units that can be constructed, rehabilitated, and conserved over a five-year time frame."

The maximum actual numbers collectively include housing construction objectives, rehabilitation objectives, and conservation objectives. Each objective is the number of housing units which potentially may be constructed during the Housing Element's five-year time frame, given the locality's developable land resources, financial and other constraints which cannot be mitigated or removed.

Local government sets its housing construction targets after determining its housing needs, its financial resources, and local constraints. Local constraints may include such items as topography, water availability, land development capability, public service and facility availability, and the availability of private utilities.

Ideally, objectives will be equal to identified needs. However, this rarely happens. The housing element statute recognizes this situation and allows local governments to establish realistic and pragmatic objectives that may be less than the identified needs. The analysis used to reach these conclusions should be included in the element as public information and to enable the State Department of Housing and Community Development to complete its review for compliance with the housing element requirements.

Government Code Section 65580(c) states "the provision of housing affordable to low and moderate income households requires the cooperation of all levels of government." Local government is not expected to finance all programs to provide for its housing needs but is expected to show a commitment to do what it can. Communities can help finance development of affordable housing utilizing its limited resources by targeting certain programs to deal with the area(s) of greatest need. The statute recognizes this may result in other objective(s) implementation effort(s) being reduced. Federal and state funding sources can be utilized, units of government like redevelopment agencies and housing authorities can be established to leverage financing, and cooperative ventures with the private sector and nonprofit development corporations can be instituted.

Programs

Government Code Section 65583(c) states that the housing element shall include "a program which sets forth a five-year schedule of actions the local government is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the housing element through the administration of land use and development controls, provision of regulatory concessions and incentives, and the utilization of appropriate federal and state financing and subsidy programs when available."

"The program shall include an identification of the agencies and officials responsible for the implementation of the various actions and the means by which consistency will be achieved with other general plan elements and community goals. The local government shall make diligent efforts to achieve public participation of all economic segments of the community in ~~the~~ development of

the housing element, and the program shall describe this effort."

The Housing Element's program statements are the means it intends to use to implement its policies and objectives. These programs show that the County is committed to implement its Housing Element by: (1) identifying agencies and officials that will be responsible for meeting quantified objectives; (2) specifying when implementation steps will be taken; and, (3) identifying potential funding sources.

Shasta County's combined housing program efforts provide strategies that result in providing the following:

1. Projected need by <u>all</u> income levels.

2. Provisions to increase the variety of housing and densities.

3. Available sites for each variety of housing type and densities.

A variety of housing types and densities for each type include:

1. Traditional Single Family Housing
   a. Ownership
   b. Rental

2. Manufactured Single Family Housing
   a. Manufactured Housing
      (1) Ownership
      (2) Rental
   b. Mobile Homes
      (1) Ownership
      (2) Rental

3. Multifamily Housing
   a. Ownership
   b. Rental

This update maintains a consistent format when describing programs for purposes of meeting the housing element requirements of State planning law. These programs are identified in Chapter 7.0 and each program group contains the following format:

A. Identified Need and Construction Objectives

B. Local Limitations

C. Specific Programs

Description:
Responsibility:
Timing:
Funding:

B. PUBLIC PARTICIPATION

Government Code Section 65583(c) requires local governments to "make a diligent effort to achieve public participation of all economic segments of the community in the development of the housing element, and the element shall describe this effort."

This Housing Element revision meets public participation requirements with the following actions:

1. A Housing Element Advisory Committee was established to help draft the Housing Element and included the following representation:

    a. Shasta County Commission on Aging.
    b. Shasta Senior Nutrition Programs, Inc.
    c. People of Progress.
    d. Shasta County Housing/Community Action Programs.
    e. Shasta Builders Exchange.
    f. Legal Services of Northern California, Inc.
    g. Shasta County Board of Realtors.
    h. Shasta Housing Development Corp.
    i. Redding Bank of Commerce

2. The draft Housing Element was circulated to housing interest groups.

3. Joint public workshops with the Planning Commission and Board of Supervisors were held, which included the Housing Element Advisory Committee.

4. Public Hearings were held before the Planning Commission and Board of Supervisors.

5. Special advertising and outreach measures go here (Outreach to housing interest groups such as church, low income, handicapped, senior citizen, community, and nonprofit groups.)

Footnotes

Footnotes are numbered for each chapter and, if noted, provided at the end of that chapter.

7.3.2 HOUSING MARKET CONDITIONS

Chapter 2 provides an analyses of population and employment trends, income and household characteristics, housing affordability and other related issues required in the Housing Element by State planning law.

A. POPULATION CHARACTERISTICS

The population of Shasta County was 115,715 in 1980. The 1990 Census reported a population of 147,036. Over 50.%, or 74,761 lived in cities while 72,275 persons, or 49.2% reside in unincorporated areas in 1990.

The estimate County population was 151,821 in 1991, according to the State Department of Finance (DOF), which represents a population increase of 3.25% during that year. Table 2-1 shows yearly gains for population, households, and housing units.

TABLE 2-1
POPULATION, HOUSEHOLDS, AND HOUSING UNIT GROWTH
Shasta County
1980 - 1991

Year	Population	Annual % Growth	Household Population	Housing Units	Annual % Growth
1980	115,715		114,541	47,446	
1981	118,575	2.47%	117,367	48,634	2.50%
1982	121,146	2.16%	119,783	49,561	1.90%
1983	122,470	1.09%	120,949	50,157	1.20%
1984	124,516	1.67%	122,935	51,463	2.60%
1985	127,501	2.36%	125,885	52,425	1.86%
1986	130,231	2.14%	128,407	53,900	2.81%
1987	132,710	1.90%	130,772	55,332	2.65%
1988	136,181	2.61%	134,070	56,877	2.79%
1989	140,083	2.86%	137,635	58,688	3.18%
1990	147,036	4.96%	144,318	60,552	3.17%
1991	151,821	3.25%	149,032	62,193	2.71%

Source: U.S. Bureau of the Census (1)

Age

The 1990 median age in Shasta County was 34.9 years, according to the U. S. Census, which is higher than the median age of residents in the two incorporated cities within the County. The 1980 median age was 31.2 years. The 1990 median age in Redding was 33.5 years and in Anderson 30.9 years, while the median age in unincorporated Shasta County was 36.3 years.

1990 Census figures identified age distribution in Shasta County as shown on Table 2-2.

TABLE 2-2
AGE DISTRIBUTION
Shasta County
1990

	Total County		Unincorporated	
Age	Distribution	%	Distribution	%
Under 5 Years	11,253	7.7	4,968	6.9
5 to 15 Years	24,947	17.0	12,554	17.4
16 Years and Over	110,836	75.3	54,713	75.7
18 Years and Over	106,625	72.5	52,419	72.5
18 To 20 Years	5,611	3.8	2,542	3.5
21 To 24 Years	6,253	4.2	2,428	3.4
25 To 44 Years	44,475	30.2	21,276	29.4
45 To 54 Years	16,226	11.0	9,058	12.5
55 To 59 Years	6,505	4.4	3,544	4.9
60 To 64 Years	6,845	4.6	3,681	5.1
65 Years and Over	20,710	14.0	9,890	13.7
75 Years and Over	8,026	5.4	3,380	4.7
85 Years and Over	1,680	1.1	582	0.8

Source: U.S. Bureau of the Census (2)

The elderly population (60 years and older as recognized by the Older Americans Act of 1965) of 27,555 persons accounts for 18.7% of the population in Shasta County and 18.8% (13,571 persons) in the unincorporated area. By comparison, 14.2% of California's population is 60 years and older.

Persons 65 years and older (20,710) account for 14.1% of the population in Shasta county and 13.7% (9,890 persons) in the unincorporated area.

Both 60 years and over and 65 years and over are reported because some programs require 60 and others use 65 to qualify.

Ethnicity

Shasta County's population is 90.4% white. The largest minority group in Shasta County is comprised of individuals of Hispanic origin (3.7%). The second largest minority group, American Indian, Eskimo, or Aleut represents 2.6% of the population in Shasta County. In the unincorporated area 91.7% of the population is white, 3.5% of Hispanic origin and 3.0% American Indian, Eskimo, or Aleut

A breakdown of Shasta County's population by race and Hispanic Origin is shown on Table 2-3.

TABLE 2-3
POPULATION BY RACE AND HISPANIC ORIGIN
Shasta County-1990

	Total County		Unincorporated	
Race	Number	%	Number	%
White	137,977	90.4	68,657	91.7
Black	1,081	0.7	320	0.4
American Indian, Eskimo, or Aleut	3,954	2.6	2,231	3.0
Asian or Pacific Islander	2,684	1.8	453	0.6
Other Race	1,340	0.8	614	0.8
Hispanic Origin (Of Any Race)	5,652	3.7	2,627	3.5

Source: U.S. Bureau of the Census (3)

B. EMPLOYMENT and INCOME CONDITIONS

According to 1980 Census data, 42,014 persons were employed and 6,740 or 13.8% of the labor force was unemployed in Shasta County. In 1990 the Census reported 58,578 persons employed and 5,623 or 8.8% unemployed. There were 27,969 persons employed in the unincorporated area and 2,544 (8.4%) persons were unemployed.

The State of California Employment Development Department (EDD) reported in June 1991 that Shasta County had an 8.6% unemployment rate for 1990. This is 3.0% above the State average of 5.6% for the same year. In July, 1992, the County's unemployment rate stood at 11.4% while Statewide it was 9.8%.

According to 1990 Census data, there are approximately 1.03 persons per household in the labor force. This figure represents a decrease since 1980 (1.1%). However, the household size has decreased from 2.66 persons per household (1980) to 2.58 persons per household, although more recent trends suggest that it is again rising.

The percentage of females in the labor force has increased from 40% in 1980 to 45% in 1990.

Employment Opportunities

The two employment sectors in Shasta County with the highest percentage of persons employed in 1980 were government related services (19.8%) and retail trade (21.5%). Census data for 1990 indicates retail trade Countywide dropped to 20.2% and government employment dropped to 16.9%. In the Unincorporated area 19.2% of the persons employed were in retail trade and 16.2% were in government services.

Employed persons 16 years and over, by industry, are listed in Table 2-4.

TABLE 2-4
EMPLOYED PERSONS BY INDUSTRY
Shasta County
1990

Industry	Total County Number	Total County %	Unincorporated Number	Unincorporated %
Agriculture, Forestry, and Fisheries	2,091	3.5	1,355	4.8
Mining	200	.3	123	0.4
Construction	5,320	9.0	2,824	10.1
Manufacturing:				
Nondurable Goods	2,234	3.8	958	3.4
Durable Goods	4,204	7.1	2,437	8.7
Transportation	2,630	4.4	1,323	4.7
Communications and Other Public Utilities	1,883	3.2	985	3.5
Wholesale Trade	1,907	3.2	869	3.1
Retail Trade	11,835	20.2	5,375	19.2
Finance, Insurance, and Real Estate	3,398	5.8	1,403	5.0
Services:				
Business and Repair	2,735	4.6	1,341	4.8
Personal	2,305	3.9	1,032	3.7
Entertainment and Rec.	688	1.1	396	1.4
Professional and Related				
Health	5,343	9.1	2,444	8.7
Education	4,907	8.3	2,221	7.9
Other and Related	4,243	7.2	1,722	6.2
Public Administration	2,655	4.5	1,161	4.2

Source: U.S.Bureau of the Census (4)

Household Income Distribution

Shasta County's median and mean household incomes in 1980 were $14,699 and $18,048, respectively, which were slightly lower than the County's median and mean family incomes of $17,024 and $20,197. The 1990 Census reports the median and mean household incomes have risen to $25,581 and $32,210 and median and mean family incomes are now $30,332 and $36,478, respectively. In the unincorporated area median and mean household incomes are $26,199 and $32,643 and family median and mean incomes are $30,173 and $36,301, respectively.

The 1980 Shasta County mean family income for residents of Asian origin was the highest ($26,579) followed by those of Spanish origin ($20,609) and white families ($20,258). In 1990 the mean family income by race found whites with the highest income ($32,483) followed by the Hispanic origin ($31,356) and then Asian and Pacific Islander ($29,528). In the unincorporated area, Asian and Pacific Islander mean income ($47,319) was far above other races such as White ($32,801), Black ($31,029), and Hispanic origin ($30,105).

Income by household, family and nonfamily households in unincorporated Shasta County is listed in Table 2-5.

TABLE 2-5
INCOME BY HOUSEHOLD, FAMILY AND NONFAMILY HOUSEHOLDS
Unincorporated Shasta County
1990

Income:	Households	Families	Nonfamily Households
$ 0- 4,999	1,151	528	688
$ 5,000- 9,999	3,434	1,685	1,917
$ 10,000-14,999	3,172	2,239	960
$ 15,000-24,999	5,010	3,950	1,070
$ 25,000-34,999	9,314	3,681	582
$ 35,000-49,999	4,814	4,312	398
$ 50,000-74,999	3,160	2,866	197
$ 75,000-99,999	930	828	76
$100,000-Or More	751	703	46
Total	31,736	20,792	5,934

Source: U.S. Bureau of the Census (5)

Poverty

In 1980, 8% of the total Shasta County population had incomes below the Federal poverty level. This poverty level, which is adjusted annually by the Census Bureau, takes into account family size, number of children and the age of the family householder or unrelated individual. The degree to which a family is defined as being in poverty is largely determined by the presence of the householder's spouse, age, and the presence and age of children.

In 1990, 13.7% of the total Countywide population had incomes below the Federal poverty status. Countywide, males fared better than females with 44.1% of males below poverty status and 55.9% of females below poverty status. On the other hand, above-poverty data from the Census reveals 49.3% are male and 50.2% are female. In the unincorporated area, 12.7% of the population was in the poverty status, of which 46.4% were male and 53.6% were female. For those above-poverty status, 50.7% were males and 49.3% were females.(6)

Public Assistance

According to information in the State Department of Social Services' report Public Welfare in California, aid to families with dependent children (AFDC) increased by 4.23% between 1988 and 1990 in Shasta County.

AFDC payments to White (non Hispanic) persons increased by 7.58% while the two largest minorities, Hispanic and American Indian, remained the same.

Supplemental Security Income (SSI) recipients increased 19.5% between 1987 and 1989 as reported by the Social Security Administration, Office of Research and Statistics. Programs for the aged and blind increased somewhat and programs for the disabled increased by 27.54%.

C. HOUSING VALUE AND COSTS

The median housing unit value determined by owners for Shasta County, as reported by the Census, in 1980 was $61,000, compared to a median value of $91,000 for 1990. The median sale price for 1991 was $108,668 countywide according to data from the Shasta County Board of Realtors. In the unincorporated area owners determined the 1990 median value to be $91,041, almost the same as countywide.

TABLE 2-6
HOUSING UNITS BY VALUE
Shasta County
1990

	Number of Housing Units			
	1980		1990	
Value	Number	%	Number	%
Less Than $15,000	412	2.5	125	0.8
$ 15,000-$19,999	341	1.9	72	0.3
$ 20,000-$24,999	524	2.8	61	0.2
$ 25,000-$49,999	590	3.9	112	0.5
$ 30,000-$34,999	817	4.3	203	0.8
$ 35,000-$39,999	1,022	5.3	305	1.2
$ 40,000-$49,999	2,884	15.1	1,079	4.5
$ 50,000-$99,999	10,473	54.9	12,495	51.0
$100,000-149,000	1,561	8.2	6,546	26.8
$150,000-$199,999	295	1.5	2,151	8.8
$200,000 or more	161	0.8	1,284	5.4

Source: U.S. Bureau of the Census (7)

In 1980, 54.9% of the County's housing stock was valued by their owners within the range of $50,000-$100,000, 9.5% of the County's housing stock was valued at $100,000 or more, and only 0.8% was valued at $200,000 or more.

In 1990, approximately 51.0% of the County's housing stock was valued by their owners within the range of $50,000-100,000, 41.0% valued at $100,000 or more , and 5.4% valued at $200,000 or more.

There were 1,131 residential sales reported to the Shasta County Board of Realtors in 1991. A total of 64, or 5.65% were below $60,000, 400, or 35.36% were between $60,000-100,000, and 667, or 58.97% were above $100,000.

Owner and Renter Monthly Costs

Median monthly owner costs for Shasta County in 1980 equaled $350 for those owners with a mortgage and $91 for those without a mortgage. In 1980, the median gross renter costs in the County was $240.

Data from the 1990 Census reports Countywide housing costs almost doubled compared to 1980. Median owner costs with a mortgage were $682 and owners without a mortgage $176. Median rents rose to $432. In the unincorporated area an owner's median costs with a mortgage was $668 and without a mortgage $179. Median rents were $406.

Overpayment

Overpayment is defined by the U. S. Census Bureau as a household who pays 25 percent or more of its income for housing.

Table 2-7 illustrates that countywide, 29.7% and in the unincorporated area, 28.0% of the households occupied by owners are paying more than 25% of their income for housing. Countywide, 48.7% and in the unincorporated area 56.4% of the households that rent are paying more than 25% of their income for housing.

TABLE 2-7
OVERPAYMENT BY HOUSEHOLDS
Shasta County
1990

Type of Unit	Households	Paying 25% or More	% of Total
Countywide			
Owner	24,433	7,268	29.7
Renter	18,589	9,058	48.7
Total	43,022	16,326	37.9
Unincorporated			
Owner	11,673	3,264	28.0
Renter	5,295	2,987	56.4
Total	16,968	6,251	36.8

Source: U.S. Bureau of the Census (10)

While 25% of the household income has been the traditional threshold, it is no longer a realistic indicator of overpayment. Several public and private lending institutions have readjusted their overpayment criteria to more realistically account for the percentage of income households able to devote to housing expenditures without sacrificing other necessities. These household expenditures include: mortgage payments , property taxes, utilities and insurance. Based on a review of guidelines set by several lending institutions , the County has determined that a 25% ratio for lower income residents and a 35% housing-to-income ratio for moderate and above moderate income residents is a more representative indicator of a household's ability to pay. In designing housing programs, the County will use the 35% measure for moderate and above-moderate income groups.

Tables 2-8 and 2-9 present the number of renter and owner households which devoted more than 25% and 35% of their income to housing in 1990.

TABLE 2-8
MEDIAN MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME
Unincorporated Shasta County-1990

	Percentage of Income			
Household Income	0-24%	25-35%	35+%	Total
Less Than $10,000	350	118	629	1,097
$10,000-19,999	1,201	309	557	2,067
$20,000-34,999	1,885	574	341	2,800
$35,000-49,999	2,125	420	69	2,614
$50,000 Or More	2,785	232	15	3,032

Source: U.S. Bureau of the Census (8)

TABLE 2-9
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME
Unincorporated Shasta County-1990

	Percentage of Income			
Household Income	0-24%	25-35%	35+%	Total
Less Than $10,000	74	134	1,259	1,467
$10,000-19,999	256	415	755	1,426
$20,000-34,999	1,074	294	92	1,460
$35,000-49,999	574	31	7	612
$50,000 Or More	330	0	0	330

Source: U.S. Bureau of the Census (9)

D. NUMBER OF HOUSING UNITS BY TENURE AND TYPE

In 1980 there were 46,484 year round housing units in Shasta County. The percentage of renter-occupied units in Shasta County as of 1980 equaled 32.7% (14,057) of all occupied housing units.

The 1990 Census reports 55,966 housing units with 19,843, or 35.5% occupied by renters. In the unincorporated area 23.2% of the housing units are occupied by renters.

Table 2-10 shows housing tenure in Shasta County, by community.

TABLE 2-10
HOUSING TENURE
By Census Division and Community, Shasta County
1990

Community	Occupied Rentals	Occupied Ownership	Total Occupied
Central Shasta Division	751	2,868	3,619
East Shasta Division	936	2,149	3,085
Burney CDP	411	857	1,268
Sacramento Canyon Division	194	544	738
Southwest Shasta Division	287	1,073	1,360
Redding-Anderson Division	17,675	29,489	47,164
Central Valley CDP	473	1,108	1,601
Cottonwood CDP	245	431	676
Anderson City	1,485	1,646	3,131
Redding City	12,146	13,959	26,105
Incorporated	13,631	15,605	29,236
Unincorporated	6,212	20,518	26,730
Total County Divisions	19,843	36,123	55,966

Source: U.S. Bureau of the Census (11)

In 1980 the most noticeable difference between the incorporated areas and the unincorporated areas of the County was in the number of mobile homes. The incorporated City areas of Redding and Anderson had approximately 1,409 mobile homes in 1980 while the unincorporated areas contained over 7,500 mobile homes.

Additionally, the two areas differed in that the incorporated City areas contained a higher percentage of structures with three or four units (6.8% compared to 2%) and structures with five or more units (24.8% compared to 3.3%).

Tables 2-11 and 2-12 show relevant 1990 Census data for single family units, multi-family, and mobile homes.

TABLE 2-11
NUMBER AND TYPE OF DWELLING UNITS
Shasta County
1980 to 1990

Year	Total	Single Family	%	Multi Units	%	Mobile Homes	%
1980	47,446	29,914	63%	8,352	17%	9,180	19%
1981	48,634	30,707	63%	8,415	17%	9,512	19%
1982	49,561	31,366	63%	8,421	16%	9,774	19%
1983	50,157	31,750	63%	8,397	16%	10,010	19%
1984	51,463	32,741	63%	8,522	16%	10,200	19%
1985	52,425	33,491	63%	8,564	16%	10,370	19%
1986	53,900	34,395	63%	8,965	16%	10,540	19%
1987	55,332	35,498	64%	9,106	16%	10,728	19%
1988	56,877	36,798	64%	9,205	16%	10,874	19%
1989	58,688	37,968	64%	9,601	16%	11,119	18%
1990	60,552	39,549	65%	9,743	16%	11,260	18%

Source: California Department of Finance (12)

TABLE 2-12
SHASTA COUNTY DWELLING UNITS
1990

Category	Unincor-porated	Anderson	Redding	Total	% of Total
Single-Family	20,165	2,176	17,209	39,549	65.3
Multi-Family, 2 to 4 Units	568	365	3,574	4,507	7.5
Multi-Family, 5 or More Units	282	549	4,037	4,868	8.0
Mobile homes	9,066	144	2,418	11,628	19.2
Total	30,081	3,234	27,238	60,552	100.0

Source: U.S. Bureau of the Census, 1990 (13)

Chapter 2 Footnotes

(1) Summarized by California Department of Finance, Demographic Research Unit, Report E-8090 City.

(2) Bureau of Census Summary Population and Housing Characteristics (BCS) Table 1, Age.

(3) BCS Table 3 , Sex, Race, and Hispanic Origin.

(4) Bureau of Census Summary Tape File 3 (STF 3), Population: Industry and Occupation, P. 77. Industry.

(5) STF 3, Population: Income p.80/81/107/108/110/111. Household, Family, and Nonfamily Income in 1989.

(6) STF 3, Population: Poverty Status, P117/118.

(7) Bureau of Census Summary Tape File 1 (STF 1), Complete Tables, H23. Value.

(8) STF 3, Housing: Owner Costs and Income, H59. Household Income Selected Monthly Owner Costs.

(9) STF 3, Housing: Gross Rent and Income, H50. Household Income in 1989 by Gross Rent.

(10) STF 3, Housing: Owner Costs and Income, H60 and Gross Rent, H51.

(11) BCS, Table 9 and Table 11.

(12) Same as (1).

(13) BCS, Table 7.

7.3.3 HOUSING CHARACTERISTICS AND NEED

Chapter 3 provides information and an analysis of housing characteristics, housing needs, including special housing needs, energy conservation in housing and an inventory of other special housing laws and requirements, as required by the Housing Element by State planning law.

A. HOUSING CHARACTERISTICS

Housing characteristics provide data necessary to understand the availability and condition of the housing stock. This data is used to identify current need and prepare projections for future need.

Size and Number of Households

In 1980, the total number of households in Shasta County equaled 43,014, representing an increase of 17,724 (41.2%) households during the ten year time period of 1970-1980. The 1990 Census reported 55,940 households, an increase of 12,926 households, which amounted to a 23.1% increase.

The median household size in Shasta County dropped significantly from 3.04 in 1970 to 2.66 in 1980. According to the 1990 Census the current household size countywide is 2.58 and 2.67 in the unincorporated area. However, there is evidence that the early 1990's recessionary economy is acting to again increase household sizes in the County.

Age of Housing Stock

The age of an area's housing stock can often help to determine the condition of available housing. Deterioration, lack of conformance to present building standards, and lack of modern facilities are all characteristics of older homes which deserve special attention. Table 3-1 specifies the age of Shasta County's housing stock.

A majority of the housing stock in Shasta County in 1980 was constructed after 1950 (25,367 units or 65%). Based on 1990 Census data, 47,199, or 78%, of the housing units have been constructed since 1950.

Mobile home units constructed prior to 1970 were not as durable as conventional housing units . Statewide mobile home standards were not enforced until 1971. However, 70% of the existing mobile homes were built after 1971. This suggest 30% may have deficiencies based on 1990 data.

TABLE 3-1
HOUSING STOCK AGE
Shasta County

	1980 Census		1990 Census	
Age	Quantity	Percent	Quantity	Percent
Pre- 1940	3,695	7.6	3,013	5.0
1940-1949	9,660	19.8	3,751	6.2
1950-1959	6,775	13.8	7,220	11.9
1960-1969	10,605	21.8	10,192	16.8
1970-1979	17,987	36.9	19,022	31.4
1980-1990	N/A		17,354	28.7
Total	48,722	100.00	60,552	100.0

Source: U.S. Bureau of the Census (2)

Housing Conditions

From February to August of 1990, the County conducted a windshield survey of exterior housing conditions of dwelling units in most of the unincorporated areas of Shasta County.

Standards developed by California Department of Housing and Community Development (HCD) were used for judging each structure's general condition. These standards are used by HCD in the Community Development Block Grant application process. Housing units were categorized in the following manner:

#1 Units that are sound or in need of only minor repair with no significant problems evident. (Minor in Table 3-2.)

#2 Units requiring moderate repair with one (1) or (2) major building systems failing (such as: foundation, electrical, plumbing, roof, siding, weather protection-windows/doors). (Moderate in Table 3-2.)

#3 Units requiring substantial repair, with more than two. (2) building components in need of repair or replacement. (Major in Table 3-2.)

#4 Dilapidated units with most or all building components in need of major repair or replacement. (Unsafe in Table 3-2.)

The last three categories were considered substandard. It is likely that many of the units in category #2 would reveal more deficiencies upon closer inspection. The units graded as category #1 are considered standard.

A total of 26,731 units were surveyed, representing 90 percent coverage of the approximately 30,000 units in the unincorporated area of the County Overall, 11,231 units (42 0%) were found to be substandard. Results are displayed on Table 3-2 by number and Table 3-3 by percentage.

TABLE 3-2
UNINCORPORATED SHASTA COUNTY
HOUSING CONDITION SURVEY
NEED FOR REPAIR RESULTS
By Number
1990

Community	Total	Minor	Moderate	Major	Unsafe
Airport Road Area	791	567	61	150	13
Balls Ferry Rd.	1,067	515	79	432	41
Bella Vista	1,374	1,011	111	238	14
Burney	1,332	658	70	464	140
Cassel	199	125	40	32	2
Centerville	780	560	120	85	15
Central Valley	2,066	1,320	337	374	35
Central Redding-uninc.	54	21	5	28	0
Churn Creek Area	969	590	28	326	25
Cottonwood	1,816	808	332	597	79
Dersch Road [both ends]	346	204	50	81	11
East Project City	89	53	35	1	0
Fall River Mills	530	275	27	183	45
French Gulch	21	102	26	56	29
Glenburn	285	168	37	64	16
Happy Valley	1,914	1,330	273	285	26
Hat Creek	117	55	5	51	6
Hwy 273	1,038	514	52	437	35
Igo\Ono	109	54	10	36	9
Johnson Park	497	250	59	156	32
Jones Valley	1,081	629	323	125	4
Keswick	182	108	22	46	6
Lake Blvd.	1,037	612	363	52	10
Lakehead	518	305	66	122	25
Loomis Corner	378	163	22	176	17
McArthur	307	180	29	76	22
Millville	141	83	29	25	4
Montgomery Creek*	156	64	20	54	18
Mountain Gate	423	250	120	51	2
Oak Run	327	193	47	67	20
Old Shasta	575	339	94	118	24
Old Station	162	96	5	57	4
Olinda [see Happy Valley]	—	—	—	—	—
Ono [see Igo]	—	—	—	—	—
Palo Cedro	1,852	1,293	220	318	21
Pine Grove	440	250	72	105	13
Platina	16	0	5	6	5
Quartz Hill Rd.	155	90	56	7	2
Round Mountain*	272	100	71	86	15
Shingletown	1,865	1,010	447	368	40

TABLE 3-2 (Continued)

Community	Total	Minor	Moderate	Major	Unsafe
Summit City	648	322	152	124	50
Sweetbriar	224	53	36	98	37
West Anderson Dr.	63	30	18	14	1
Whitmore	323	150	98	70	5
TOTALS	26,731	15,500	4,072	6,241	918

*Data for Montgomery Creek and Round Mountain prior to disasterous Fountain Fire of August 1992.

Source: Shasta County Planning Division, 1991

TABLE 3-3
SHASTA COUNTY
HOUSING CONDITION SURVEY
NEED FOR REPAIR RESULTS
By Percentage

Community	Total	Minor	Moderate	Major	Unsafe
Airport Road Area	791	71	7	18	1
Balls Ferry Road	1,067	48	7	40	3
Bella Vista	1,374	73	8	17	1
Burney	1,332	49	5	34	10
Cassel	199	62	20	16	1
Centerville	780	71	15	10	1
Central Valley	2,066	63	16	18	1
Redding-uninc.	54	38	9	51	0
Churn Creek Area	969	60	2	33	2
Cottonwood	1,816	44	18	32	4
Dersch Road [both ends]	346	58	14	23	3
East Project City	89	59	39	1	0
Fall River Mills	530	51	5	34	8
French Gulch	213	47	12	26	13
Glenburn	285	58	12	22	5
Happy Valley	1,914	69	14	14	1
Hat Creek	117	47	4	43	5
Hwy 273	1,038	49	5	42	3
Igo\Ono	109	49	9	33	8
Johnson Park	497	50	11	31	6
Jones Valley	1,081	58	29	11	-1
Keswick	182	59	12	25	3
Lake Blvd.	1,037	59	35	5	-1

TABLE 3-3 (Continued)

Community	Total	Minor	Moderate	Major	Unsafe
Lakehead	518	58	12	23	4
Loomis Corner	378	43	5	46	4
McArthur	307	58	9	24	7
Millville	141	58	20	17	2
Montgomery Creek*	156	41	12	34	11
Mountain Gate	423	59	28	12	-1
Oak Run	327	59	14	20	6
Old Shasta	575	58	16	20	4
Old Station	162	63	3	35	2
Olinda [see Happy Valley]	—	—	—	—	—
Ono [see Igo]	—	—	—	—	—
Palo Cedro	1,852	69	11	17	1
Pine Grove	440	56	16	23	2
Platina	16	0	31	37	31
Quartz Hill Rd.	155	58	36	4	1
Round Mountain*	272	36	26	31	5
Shingletown	1,865	54	23	19	2
Summit City	648	49	23	19	7
Sweetbriar	224	23	16	43	16
West Anderson Dr.	63	47	28	22	1
Whitmore	323	46	30	21	1
TOTALS	26,731	58	15	23	4

*See Fountain Fire note in Table 3-2.

Source: Shasta County Planning Division, 1991 (4)

Housing Units Lacking Complete Plumbing

In 1980, 348 (0.8%) of the total occupied housing units lacked complete plumbing for exclusive use. The 1990 Census reports Countywide that 528, or 0.8%, and in the unincorporated area 202, or 0.8%, of the total occupied housing units lacked complete plumbing for exclusive use.

Vacancy Rates

The vacancy rate is both an indicator of unused housing stock and a measure of consumer opportunity for mobility and choice in living accommodations. Market analysts have traditionally determined that the minimum market vacancy rate (percent of units for sale or for rent) necessary to insure adequate choice in the housing market is 5 to 6% for rental units and 2% for ownership units.

The gross vacancy rate as tabulated for the Census is a measure of vacant year-round units as a percentage of the total stock of year-round units. Table 3-4, on the following page, summarizes vacancy rates by Community and tenure.

Overcrowding

Overcrowding is defined as the number of housing units occupied by more than one person per room (excluding kitchens and bathrooms). The County of Shasta experienced a considerable decline in the incidence of overcrowding between 1970 and 1980. In 1970 7.0% of the total number of housing units, were overcrowded while in 1980, the rate of overcrowding had dropped to 3.9%.

The 1990 Census reports 2,781 of 55,966 occupied housing units had more than 1.01 or more persons per room. This amounts to 4.97%, one (1) percent higher than in 1980. The unincorporated area has 5.32% of the occupied housing units with more than 1.01 or more persons per room. Renter occupied units in the unincorporated area have the highest percent (10.64%) of overcroweded units. Table 3-5, on the following pages, identifies overcrowding, by community, in Shasta County.

TABLE 3-4
VACANCY RATES
By Community and Census Units, Shasta County
1990

Community	Homeowner	Renter
Central Shasta Division	1.9%	9.5%
East Shasta Division	1.4%	8.8%
Burney CDP	2.2%	7.2%
Sacramento Canyon Division	3.9%	13.4%
Southwest Shasta Division	2.6%	4.3%
Redding-Anderson Division	1.4%	3.3%
Central Valley CDP	1.3%	3.7%
Cottonwood CDP	.7%	3.2%
Anderson City	.7%	2.9%
Redding City	1.5%	3.0%
Incorporated	1.1%	3.0%
Unincorporated	3.0%	7.2%
Total County	1.5%	4.0%

Source: U.S. Bureau of the Census (4)

TABLE 3-5
OVERCROWDING
By Community, Shasta County
1990

Community	Units	*More	%	Owner Occupied	Renter Occupied
Central Shasta Division	3,619	217	6.00	#N/A	N/A
East Shasta Division	3,085	158	5.12	N/A	N/A
Burney CDP	1,268	71	5.60	N/A	N/A
Sacramento Canyon Division	738	40	5.42	N/A	N/A
Southwest Shasta Division	1,360	86	6.32	N/A	N/A
Redding-Anderson Division	47,164	2,280	4.83	N/A	N/A
Central Valley CDP	1,601	113	7.06	N/A	N/A
Cottonwood CDP	676	37	5.47	N/A	N/A
Anderson City	3,131	185	5.91	3.82	8.48
Redding City	26,105	1,173	4.49	1.47	1.47
Incorporated	29,236	1,358	4.64	N/A	N/A
Unincorporated	26,730	1,423	5.32	3.71	10.64
Total County	55,966	2,781	4.97	2.84	8.84

* More = 1.01 or more persons per room

N/A = Not Available

Source: U.S. Bureau of the Census (5)

B. HOUSING NEEDS

Under the state housing element requirement, housing needs are defined in three categories: existing needs, projected needs over a five year period, and special needs. Based on the most current information available, existing housing needs for the unincorporated area have been identified and are summarized as follows:

- Overcrowding (Table 3-5):

  2,781 occupied units

- Substandard Units (Table 3-2):

  4,072 needing moderate rehabilitation
  6,241 units needing substantial rehabilitation
  918 units in dilapidated condition
  11,231 Total

Overpayment (Table 2-9):

2,987 renters
3,264 owners
6,251 Total

An overcrowded housing unit is defined as one in which more than one person per room (excluding bathrooms and kitchens) reside.

Projected housing needs are the total additional units needed to accommodate the projected population expected to be added in five years (or within the time frame of the housing element) in terms of units that are affordable, in standard condition, and not overcrowded.

Special housing needs focus on the needs of subgroups within the population with special housing requirements. The state requires that all housing elements address the needs of the elderly, the disabled, large families, farm workers, households headed by single mothers, and families and persons in need of emergency shelter and transitional housing.

Fair Share of Projected Regional Needs

According to housing element law, each jurisdiction must project in its housing element the number of new housing units that need to be constructed to serve the needs of all income groups of the projected population. To assist cities and counties, the state has assigned each council of governments responsibility for determining the existing and projected housing needs for its region. In areas without a council of governments, like Shasta County, the State HCD determines these needs.

The projected household needs to July 1, 1992 and basic construction needed from January 1984 to January 1992 are shown in Tables 3-7 and 3-8 found on the following pages.

Special Needs

Beyond the general housing needs documented above, Government Code Section 65583(a)6 requires that the housing element include an assessment of the housing needs of special groups within the community, including those of the disabled, the elderly, large families, farm workers, families with female heads of households, and families and persons in need of emergency shelter.

The Census is generally the most reliable and comprehensive source of the demographic information on which special needs analyses are based.

Work Disability

The term "disabled" refers to a disability (physical, mental, or sensory) which prevents or precludes a person form doing work either in or outside of the home. The number of disabled persons in a community has important implications for providing certain social services, in the removal of barriers to facilities, and in developing housing which has specialized access for disabled residents.

According to the 1990 Census, 11,871, 13.2%, of Shasta County's 90,126 residents aged 16 to 64 had work disabilities. Also, 6,163, or 13.7%, of the 44,823 unincorporated area residents aged 16 to 64 had work disabilities.

TABLE 3-6
SHASTA COUNTY
PROJECTED HOUSEHOLDS to JULY 1, 1992

Area Income Group	1992	Increase From 1983	Percentage Increase 1983-1992
REDDING-ANDERSON INCORPORATED			
Redding Very low	5,313	1,178	23
Other lower	3,927	871	17
Moderate	4,851	1,075	21
Above moderate	9,008	1,996	39
Total	23,099	5,120	100
Anderson Very low	860	28	30
Other lower	545	*(18)	19
Moderate	631	41	22
Above moderate	832	135	29
Total	2,868	186	100
REDDING-ANDERSON UNINCORPORATED			
Very low	4,852	784	23
Other lower	3,586	756	17
Moderate	4,219	682	20
Above moderate	8,437	1,186	40
Total	21,094	3,408	100
REDDING-ANDERSON AREA TOTAL			
Very low	11,025	1,990	23
Other lower	8,058	1,635	17
Moderate	9,701	1, 772	21
Above moderate	18,277	3,317	39
Total	47,061	8,714	100
RURAL SHASTA			
Very low	2,621	679	26
Other lower	1,713	444	17
Moderate	2,318	600	23
Above moderate	3,427	888	34
Total	10,079	2,611	100
COUNTY TOTAL			
Very low	13,646	2,669	24
Other lower	9,771	2,079	18
Moderate	12,019	2,372	21
Above moderate	21,704	4,205	37
Total	57,140	11,325	100

* Number in parentheses indicates a decrease in this income group.
Source: Shasta County General Plan (6)

TABLE 3-7
BASIC CONSTRUCTION NEEDS

Area	Construction Needed 1/84 to 7/92
REDDING-ANDERSON	
Redding	4,173
Anderson	166
Redding-Anderson Unincorporated	3,882
RURAL SHASTA	3 ,121
COUNTY TOTAL	11, 342

Source: Shasta County General Plan (7)

A person with a work disability may have a health condition which limits the kind or amount of work which he or she can do or which prevents working at a job or business altogether. A work disability may also be defined as a health condition which limits the choice of jobs. Table 3-9 shows work disability status in unincorporated Shasta County.

TABLE 3-8
WORK DISABILITY STATUS BY AGE AND SEX
Unincorporated Shasta County
1990

	Male		Female	
	16-64	65+	16-64	65+
With Work Disability:				
In Labor Force:				
Employed	1,093	119	571	19
Unemployed	197	20	110	0
Not in Labor Force:				
Prevented from Working	1,828	1,442	1,718	1,591
Not Prevented	342	238	304	166
Total	3,460	819	2,703	1,776

Total Male: 4,279
Total Female: 4,479
Grand Total: 8,758

Source: U.S. Bureau of the Census (8)

Mobility And Self Care Limitation

Special needs of disabled persons vary depending upon the particular disability with which one is afflicted. For example, the needs of a blind person differ greatly from those of persons confined to a wheelchair. Special facilities such as ramps, elevators or specially designed restrooms necessary for wheelchair access are architectural features needed to make dwellings suitable for persons confined to a wheelchair. Special features needed by ambulatory persons constrained by other disabilities may not be architectural. Instead, these might be simple alterations to conventional dwelling units for furnishing and appliances which make ordinary tasks of housekeeping and home life less trying and more enjoyable.

Table 3-9 shows Mobility and Self Care Limitations.

TABLE 3-9
MOBILITY LIMITATION BY AGE AND SEX
Unincorporated Shasta County
1990

	Male		Female	
	16-64	65+	16-64	65+
In Labor Force:				
Employed	1,098	119	584	19
Unemployed	203	20	110	0
Not In Labor Force	2,142	1,671	1,983	1,735

Total Male: 3,813
Total Female: 3,718
Grand Total: 7,531

Source: U.S. Bureau of the Census (9)

Elderly

As a percentage of all County residents, persons 65-years or older (12,834) represented 11.1% of the population in 1980. This increased 14.12% (20,710) from 1980 based on the 1990 Census. Persons 60 years and over accounted for 18.17% of the County population in 1990.

Tables 3-11 and 3-12 show the location of elderly persons in Shasta County, by community, using 60 years and over and 65 years and over.

TABLE 3-10
ELDERLY PERSONS (60 YEARS AND OVER)
Shasta County By Community and Census Unit
1990

Community	Population	Elderly	%
Central Shasta Division	9,707	1,958	20.17%
East Shasta Division	8,156	1,689	20.71%
Burney CDP	3,423	583	17.03%
Sacramento Canyon Division	1,709	479	28.03%
Southwest Shasta Division	3,720	591	15.89%
Redding-Anderson Division	123,744	22,838	18.46%
Central CDP	4,340	818	18.85%
Cottonwood CDP	1,747	317	18.15%
Anderson City	8,299	1,555	18.74%
Redding City	66,462	12,429	18.70%
Incorporated	74,751	13,984	18.71%
Unincorporated	72,285	17,158	23.74%
Shasta County	147,036	31,142	21.18%

Source: U.S. Bureau of the Census (10)

TABLE 3-11
ELDERLY PERSONS (65 YEARS AND OVER)
Shasta County By Community and Census Unit
1990

Community	Population	Elderly	%
Central Shasta Division	9,707	1,385	14.26%
East Shasta Division	8,156	1,273	15.60%
Burney CDP	3,423	445	13.00%
Sacramento Canyon Division	1,709	373	21.82%
Southwest Shasta Division	3,720	427	11.47%
Redding-Anderson Division	123,744	17,252	13.94%
Central CDP	4,340	611	14.07%
Cottonwood CDP	1,747	239	13.68%
Anderson City	8,299	1,214	14.62%
Redding City	66,462	9,606	13.70%
Incorporated	74,751	10,820	14.47%
Unincorporated	72,285	9,890	13.68%
Shasta County	147,036	20,710	14.08%

Source: U.S. Bureau of the Census (11)

Needs of the elderly population include: transportation accessibility, affordable housing and service proximity, and special architectural needs in some cases.

Large Families

A large family is defined as a family with five (5) or more persons. In Shasta County large families totalled 4,404, or 13.5% of all families in 1980 and totalled 5,552 or 9.9% in 1990. In the Large families (2,865) made up 13.9% of all families in the Unincorporated area in 1990. (12)

Family size is an important consideration when it comes to planning for housing. Areas which have large concentrations of small families or single-person households need to plan for smaller units, and areas with concentrations of large families need to assure that units are large enough to accommodate such families and are available. Information concerning family size is, beyond that made available by the Census, difficult to gather which makes it almost impossible to determine location needs. Because more information is needed, Program 38 calls for the County to apply for a Technical Assistance Grant to identify the extent and location of housing needs for large families and Program 34 calls for a certain percentage of housing within a subdivision to be designed for expansion as a family grows.

Workers in Agriculture, Forestry and Fisheries

The Census indicated that 3.4% of the County's employed civilian labor force of 42,014 individuals listed farming, forestry, or mining as their occupation in 1980. The 1990 Census deleted mining from this category and reported 2091 persons employed in agriculture, forestry, and fisheries. This amounts to 3.6% of the 58,578 individuals in the County's employed labor force. In the Unincorporated area 4.8% (1,355) of the 27,969 employed persons were employed in agriculture, forestry, and fishing. (12)

The general need of Shasta County's farm workers consists of three types:

- Seasonal units for migratory single adults or groups of adults.
- Seasonal units for migratory low-income families.
- Permanent units for low-income farm worker families.

The Regional Housing Needs Plan for Shasta County notes on page 4 that "farm worker housing is minimal in the county".

Because specific data on the number of farm workers in a community is not systematically collected, it is difficult to assess the precise needs of this group. Program 38 calls for the County to apply for a Technical Assistance Grant to identify the extent of need for this group.

Female Heads-of-Household

According to 1980 Census data, there were 2,642 female-headed households in the unincorporated area, which represents 16% of the total number of households with children. The 1990 Census reports 2,441 female headed households, which represents 15.4% of all households. (13)

In 1980 Countywide 32.4% of these households fell below the poverty level, whereas in 1990 Countywide 27.42% fell into this category. (14)

The State HCD's California Statewide Housing Plan (Phase I) identifies the following distinguishing characteristics for female householder families:

- Low homeownership rate
- Younger householder
- Children present
- Low incomes and a high poverty rate
- Overcrowded
- High percentage household income spent for housing

Persons Needing Emergency Shelter and Transitional Housing

Factors contributing to the increase in homeless persons and families, and those in need of transitional housing include:

- The lack of housing affordable to very-low and low-income persons
- Increases in unemployment and wages not keeping pace with inflation
- Reductions in government subsidies
- Domestic violence and dysfunctional families
- Drug addiction and shrinkage of social programs
- Loss of single room occupancy housing (SRO's) through redevelopment
- Loss of manufacturing jobs

Housing needs of homeless persons are more difficult to measure and assess. Since the individuals have no permanent addresses they are not likely to be counted in the census.

There are three primary situations which categorize homeless persons: adults without children; families; and children.

The Shasta County Social Services Department (SCSS) provides temporary homeless money, usually 3-4 days at a time, for housing for any homeless person that has not received benefits within the last 24 months for a maximum of 16 days. If the person finds temporary housing, motel or campground, and reports back with a receipt, SCSS will pay the deposit and last months rent.

Those who do not qualify are referred to shelters. Families that qualify for long term assistance under the AFDC program, usually receive funds in 7-10 days. Homeless children are placed in foster homes.

Location of shelters and transitional facilities:

1. National Guard Armory winter shelter, 3025 South Street, Redding.

   Operated for five months each winter, this facility has a capacity of 150. Highest use to date has been 100. Administering organization is Salvation Army, 2691 Larkspur Lane, Redding, 222-2207.

2. Shasta County Women's Refuge, location of shelter confidential.

   Administration office: 2280 Benton Dr., Suite A, Redding, 244-0117.

3. Good News Rescue Mission, 3100 South Market Street, Redding.

   This 28-bed facility provides a seven-day stay to homeless individuals. Administration is at facility, 241-5754.

4. Three transitional housing facilities are jointly operated by the Shasta Housing Development Cooperation, 1422 Oregon Street, Redding, 243-0172 and People of Progress, 1242 Center Street, Redding (243-3811). They are:

   * A 16-unit (64 beds) facility at 3510 South Market Street, Redding.
   * A four-unit (16 beds) building at 705 Parkview Avenue, Redding.
   * A six-unit (24 beds) building at 655 Parkview Avenue, Redding.

A need may exist in the smaller unincorporated communities in Shasta County and, therefore, Program 38 calls for athe County to apply for a Technical Assistance Grant to identify the extent and location of housing needs for homeless persons.

C. ENERGY CONSERVATION

State law requires that housing elements contain an analysis of the availability of land for future residential growth and the adequacy of public facilities and services to accommodate this growth. Following are brief discussions of these issues as they pertain to Shasta County.

Residential Energy Conservation

Residential energy conservation measures can take two forms: those applied to the construction of new housing and those added to existing housing to increase energy efficiency (retrofitting).

State law requires local governments to implement energy conservation standards for all new residential development. Under these requirements, every new residential building constructed must meet rigorous building standards for heat gain and heat loss. In mandating these requirements, the State has largely preempted the authority of local governments to regulate building construction with respect to energy conservation.

The cost of housing, including the issue of affordability, is usually perceived on a front-end initial cost basis, which ignores the total or "life-cycle" cost of shelter. As this term implies, the life-cycle of a housing unit includes the total of all costs associated with construction, operation, and maintenance during its useful life. An important life-cycle cost of all housing units is energy.

Each year it will cost a certain amount of money to purchase the energy required to cool, heat, and light the house and to perform other functions. Until recent times, the annual life-cycle energy costs of housing were relatively stable in real dollar terms.

Energy costs to the consumer have increased 100% over and above inflation since 1970 while crude oil prices have increased more than 500%. If the cost of natural gas increases at an average rate of 7.5% per year, as the California Energy Commission has conservatively estimated, natural gas will cost almost $4.00 per therm in 2001 compared with about $0.40 per therm in 1981. If the cost of electricity increases at an average rate of 3% per year, it will cost $0.40 per kilowatt hour (kwh) in 2001 compared to $0.05 per kwh in 1981.

These calculations underscore the fact that affordable housing must recognize the need for affordable energy on a life-cycle basis. Since the per unit cost of energy is not going to decrease, affordable energy means taking steps to reduce the energy consumption requirements of housing units over their life-times. Because the housing stock can be classified as either existing or new construction, it follows that approaches to energy affordability distinguish these two conditions.

Energy use varies considerably in Shasta County because of the diverse climates. In the South Central Region planning area, at the head of the Sacramento Valley, the predominate use of energy is for summertime air-conditioning. In contrast to the South Central Region are those portions of eastern and northern Shasta County above 3,000 feet. In these areas winter heating is an important use of energy. The three major sources of energy for home needs are electricity, utility gas, and site-stored fuels (tank gas, wood, kerosine, coal, etc.)

Pacific Gas and Electric Company reported that average costs per kilowatt hour were 6. 4 cents for electricity and 51. 2 cents for natural gas in May, 1984. In 1990, costs per kilowatt hour for electricity, depending upon the baseline season, were 11.4 cents to 13.3 cents and natural gas costs were 51.9 cents to 83.9 cents.

Residential energy expenses as a percentage of income may continue to increase if energy costs continue to rise faster than growth in income. The need to make existing homes more energy efficient, especially rental units, is therefore crucial if overall housing costs are to remain at acceptable levels for the County's residents.

In July 1983, state energy conservation standards for single-family homes, as promulgated by the California Energy Commission, took effect. Standards for multi-family units took effect on January 1,1984. These standards require homes constructed after the effective date of the standards to meet a minimum acceptable level of energy conservation, either through a prescriptive package of conservation features and equipment (double glazing of windows; wall, ceiling, and floor insulation; energy efficient equipment; etc.) or a point system which ensures that an individual unit does not exceed an overall maximum energy budget.

The Energy Commission has divided the state into 16 climate zones, and a separate package of conservation requirements apply within each zone. Shasta County comprises two zones: 11 and 16.

Climate Zone 11, which covers the northern Sacramento Valley, includes the South Central Urban Region of Shasta County and the surrounding communities of Oak Run, Ingot, French Gulch, Ono, Igo, and Platina. These energy conservation requirements address the warm temperatures prevalent in the zone between May and October and the use of energy for space cooling during the hottest, summer months.

Climate Zone 16 covers the mountainous areas of eastern and northern Shasta County, in which energy for space heating during the winter months is a more important concern than space cooling during summer months. The manual for this climate zone contains special provisions for wood burning stoves, which are used frequently in the mountain counties. The energy requirements for all zones also address interior lighting and methods of reducing energy use for lighting.

The Residential Energy Standards do not apply to factory-built and mobile homes inspected by HCD. Local governments may not further regulate the construction of such homes. However, the County must enforce the energy standards for all site-built and manufactured, site-assembled homes.

Site Development

In addition to construction standards that promote energy efficiency, the County can encourage more efficient site development patterns. Since much of the unincorporated County's population reside in rural community centers, development within these existing centers would be one method of promoting more compact development. Some limited transportation related energy conservation benefits can be achieved through cluster development and an emphasis on development along existing paved roads.

The chief energy conservation benefits to be achieved by these strategies are a reduction in new paved surfaces and energy used in travel. This update includes policies to encourage placement of housing near transportation corridors. The General Plan will contain a matrix to coordinate implementation of these policies. Within the South Central Region planning area, especially areas adjacent to Redding, energy conservation benefits may also be realized by channeling new development along existing transportation routes.

Public Owned Surplus Land

According to State law, all public agencies intending to dispose of surplus land must first send a written offer to any local agencies within whose jurisdiction the land lies to sell or lease the land for the following purposes: recreation or open-space uses; enterprise zone uses; schools; or development of low- and moderate-income housing. In the event that the agency disposing of the land receives more than one offer, it must give first priority to the entity which agrees to use the site for housing for low or moderate income housing, unless the land is already being used for parks or recreation uses, in which case the entity

offering to continue these uses will receive priority (Government Code Section 54220 et seq.).

D. SPECIAL STATE HOUSING REQUIREMENTS

In addition to requiring each city and county adopt a housing element, the California Legislature has enacted some very specific requirements to ensure that local regulatory procedures do not constrain housing development. Shasta County complies with all of these requirements. The following summarizes these special housing mandates.

Findings on Housing Limits

Any city or county adopting or amending its general plan in a manner that limits the number of units that may be constructed on an annual basis must make specified findings concerning the efforts it has made to implement its housing element and the public health, safety, and welfare considerations that justify reducing the housing opportunities of the region (California Government Code Section 65302.8 and Section 65863.6).

Housing Disapprovals and Reductions

When a proposed low or moderate housing development complies with applicable local policies and regulations in effect at the time the application is determined to be complete, the local agency may not disapprove the project or reduce its density unless it makes specified findings (California Government Code Section 65589.5(d)).

Solar Energy Systems

Cities and counties may not enact zoning provisions that effectively prohibit or unnecessarily restrict the use of solar energy systems, except for the protection of public health or safety. Allowable "reasonable restrictions" include those that do not significantly increase the cost of the solar system or significantly decrease its efficiency and those that allow for an alternative system or comparable cost and efficiency (California Government Code Section 65850.5).

Secondary Residential Units

To encourage establishment of secondary units on existing developed lots cities and counties are required to either (1) adopt an ordinance based on standards set out in the law authorizing creation of second units in residentially zoned areas; or (2) where no ordinance has been adopted, allow second units by use permit if they meet standards set out in the law. Local governments are precluded from totally prohibiting second units in residentially zoned areas unless they make specific findings (California Government Code Section 65852.2).

Mobile Homes in Single-Family Zones

Cities and counties shall allow the installation of mobile homes on permanent foundations on lots zoned for conventional single-family dwellings. Cities and counties shall only subject mobile homes to the same development standards that apply to single-family dwellings. Any architectural requirements, however, shall be limited to roof overhang, roofing material, and siding material and shall not exceed those which would be required of a single-family dwelling constructed on the same lot. Any area considered to be of special historical interest may be exempted from this provision (California Government Code Section 65852.3).

Mobile Home Parks - - Permitted Uses

A mobile home park is deemed by state law to be a permitted use on all land general planned and zoned for residential use. However, cities and counties may regulate mobile home parks by use permit (California Government Code Section 65852.7).

Mobile Home Park Conversions

Any subdivider filing a tentative or parcel map to be created from the conversion a mobile home park to another use must prepare and file a report on the impact of the conversion on the displaced mobile home park residents. The subdivider shall make a copy of the report available to each resident of the mobile home park at least 15 days prior to the public hearing. The city or county with jurisdiction must consider the impact report at a public hearing and may require as a condition of approval of the conversion that the project sponsor mitigate the impacts of displacement. These provisions also apply when closure of a mobile home park is the result of a decision by a local government entity or planning agency (California Government Code Section 65863.7 and Section 66427.4).

Notification on Mobile Home Park Conversions

A city or county that has received an application for a mobile home park conversion must notify the applicant at least 30 days prior to any hearing or action of state and local requirements for applicant notification or mobile home owners and park residents concerning the proposed change. No action may be taken on the application until the applicant has satisfactorily verified that mobile home owners and park residents have been properly notified (California Government Code Section 65863.8).

Limitations on Development Permits Fees

Fees charged by local public agencies for zoning changes, variances, use permits, building inspections, building permits, subdivision map processing, or other planning services may not exceed the estimated reasonable cost of providing the service for which the fee is charged. Fees may exceed this limit only with a two-thirds vote of the electorate (California Government Code Section 54990 and Section 65909.5).

Residential Zoning

Cities and counties must zone a sufficient amount of vacant land for residential use to maintain a balance with land zoned for non-residential use (e.g., commercial and industrial) and to meet the community's projected housing needs as identified in the housing element of the general plan (California Government Code Section 65913.1).

Residential Subdivision Standards

Cities and counties may not impose standards for design and improvement for the purpose of making the development of housing for any and all economic segments of the community infeasible. Furthermore, it shall consider the effect of ordinances adopted and actions taken with respect to the housing needs of the region in which the local jurisdiction is situated (California Government Code Section 65913.2).

Coordinated Permits Processing

Each city and county must designate a single administrative entity to coordinate the review and decision-making and provision of information regarding the status of all applications and permits for residential, commercial, and industrial developments (California Government Code Section 65913.3).

Density Bonuses

When a developer agrees to construct at least 20 percent of the total units in a housing development for lower income households, 10 percent of the total units for very low income households, or 50 percent of the total dwelling units for qualifying senior citizens, the city or county must either grant a density bonus and at least one other concession or incentive, or provide other incentives of equivalent financial value. The developer must agree to ensure continued affordability for all lower income units for 30 years (10 years under particular circumstances). The density bonus must increase by at least 25 percent the other maximum allowable density specified by the zoning ordinance and the land use element of the general plan. Each city or county must set up procedures for carrying out these provisions (California Government Code Section 65913.4 and Section 65915).

Density Bonuses for Condominium Conversions

When a developer proposing to convert apartments to condominiums agrees to provide at least 33 percent of the total units in the proposed condominium project for low or moderate income households, with at least 15 percent of the total units for lower income households, the city or county must either grant a density bonus or provide other incentives of equivalent financial value. The density bonus must increase by at least 25 percent over the number of apartments to be provided within the existing structure proposed for conversion (California Government Code Section 65915.5).

CEQA and Density Reductions

Cities and counties may deny or reduce the density set forth by the general plan for a housing project only as a mitigation measure for a specific adverse impact upon public health or safety pursuant to the California Environmental Quality Act and only when there is no other feasible mitigation that would achieve comparable density results (California Public Resources Code Section 21085).

Residential Energy Conversion

Cities and counties are required to adopt energy conservation standards for new residential dwellings (excluding apartment houses with four or more stories and hotels). This law went into effect June 15, 1983.

Redevelopment Replacement Housing

Every redevelopment plan must contain provisions that provide replacement housing on a "one-for-one" basis for low and moderate income persons displaced by redevelopment activity. (California Health and Safety Code Section 33334.5).

Tax Increment Funds for Housing

Redevelopment agencies must use at least 20 percent of tax increment revenues generated by a redevelopment project to increase and improve the community's supply of housing for persons of low and moderate income. Certain findings may be made by the agency to set aside less than 20 percent if no need exists for such housing, if less than 20 percent is required to meet the need, or if a substantial effort to meet the need is being made (California Health and Safety Code Section 33334.2).

Community Care Facilities

A residential facility which serves six or fewer persons shall be considered a residential use of property, and the residents and operators of the facility shall be considered a family. No conditional use permit, zoning variance, or other zoning clearance shall be required which is not required of a family dwelling of the same type in the same zone (California Health and Safety Code Section 1566.3 and Section 1567.1).

Community Care Facilities for the Elderly

A residential facility for the elderly which serves six or fewer persons shall be considered a residential use of property, and the residents and operators of the facility shall be considered a family. No conditional use permit, zoning variance, or other zoning clearance shall be required which is not required of a family dwelling of the same type in the same zone (California Health and Safety Code Section 1569.84).

Homes for Mentally Disorderd, Handicapped Persons, or Dependent and Neglected Children

A state-authorized, certified, or licensed family care home, foster home, or group home serving six or fewer mentally disordered, or otherwise handicapped persons, or dependent and neglected children shall be considered a residential use of property. Such homes shall be a permitted use in all residential zones (California Welfare and Institutions Code Section 5116).

Chapter 7.3 Housing Characteristics and Need Footnotes

(1) STF 3, Housing permits in structure and value H25/26/27

(2) 1990 Shasta County Housing Survey

(3) 1990 Shasta County Housing Survey

(4) BCS, Table 7

(5) BCS, Table 5

(6) Shasta County General Plan, 1985

(7) Shasta County General Plan, 1985

(8) STF 3, Work Disability Status, P66

(9) STF 3, Mobility Limitation Status, P67

(10) BCS, Table 1

(11) STF 1, Household Type and Household Size, P27

(12) STF 3, Industry, P77

(13) BCS, Table 5

(14) STF 3, Poverty Status P122

7.3.4 GOVERNMENTAL CONSTRAINTS ON THE PRODUCTION OF HOUSING

A. INTRODUCTION

The identification of present and future housing needs in Shasta County is only the first step in the process of fashioning solutions to the County's housing problems. The County must also examine governmental, environmental, and economic influences that may effect the provision of new housing or the maintenance of existing housing for all income groups.

It should be noted that "constraints" resulting from government actions to housing production present only one type of possible outcome. Government actions can also exert a positive influence and serve to expand housing opportunities in a community. This section, however, only considers the constraints resulting from government actions. The positive influences that government can exert are discussed later.

B. AVAILABILITY of LAND and SERVICES for RESIDENTIAL DEVELOPMENT

State law requires that housing elements contain an analysis of the availability of land for future residential growth and the adequacy of public facilities and services to accommodate this growth. Following are discussions of these issues as they pertain to Shasta County.

Land Use and Zoning

The land use element of the County's General Plan establishes the maximum gross density allowed for residential uses . These gross densities are further refined through the application of the Shasta County Zoning Ordinance. Table 4-1 summarizes provisions of the County's land use element that affect residential densities.

Of the 19 land use designations, 10 allow residential uses. These range in maximum density from 16 units per acre in the Urban Residential designated areas to one unit per 40 acres and Natural Habitat (also 40 acre minimum) and Timber designated areas. These density limits do not apply to previously subdivided lots. Areas with 30% or greater slopes, or lands located within a lOO-year floodway may be subject to further density restrictions.

In addition to these underlying densities, the County allows the following density bonuses:

Urban Residential	- up to 25% for planned developments
	- up to 25% for cost effective projects

TABLE 4-1

SHASTA COUNTY GENERAL PLAN RESIDENTIAL DESIGNATIONS

Symbol	Designation	Maximum Gross Density
Residence as primary use:		
UR	Urban Residential	16 units / acre
SR	Suburban Residential	1 unit / 1 acre to 3 units / acre
RA	Rural Residential "A"	1 unit / 2 acres (1 unit / 3 acres in Centerville C.S.D.) - applied to rural town & community centers
RB	Rural Residential "B"	1 unit / 5 acres if within 1 mile of paved road; otherwise, 1 unit / 10 acres
MU	Mixed Use	1 unit / 2 acres
Resource use as primary use, residence allowed:		
A-CG *	Part-time Agricultural	1 unit / 5 acres
N-H	Habitat-Resource	Varies according to site approval; but 1 unit / 5 acres in Day Bench area. 100% density bonus for cluster development.
N-R	Recreation Resource	See RA (inside rural Community Center) or RB (outside rural Community Center)
N-O	Open Space	Same as N-R
T	Timber	1 unit / 40 acres (1 unit /10 acres in Dunning Site Quality Class IV or V and within 1 mile of paved road.) 100% density bonus for cluster development.

[* Other agricultural land use designations are Cropland (40 ac. min.), Grazing (760 ac. min]

Source: Shasta County General Plan (1).

The County adopted the current General Plan on January 10, 1984, with periodic updates since then. The County adopted the Housing Element on September 3, 1985, and conducted the Housing Conditions Survey in August, 1990. General Plan land use policies are implemented by the County's zoning ordinance.

The Shasta County zoning ordinance provides for multifamily housing within the following zone districts; Two-family Residential or R-2 district, Multiple-family residential or R-3 district, and the Planned Development or P-D district when the General Plan and zoning density allows multifamily housing.

The R-2 zone district allows two-unit duplexes, by right, on lots of 6,000 square feet and larger. Greater density is allowed when a use permit is granted for townhouses with the maximum density based on one dwelling unit per each 3,000 square feet of lot area. This equates to an overall maximum density of 14.5 dwelling units per acres, which is allowed under the UR designation of the General Plan. Height limitations allow at least two, and potentially three floor levels. Typically, R-2 build-out densities occur at approximately 12 dwelling units per acre in Shasta County.

The R-3 zone district allows duplexes, apartments and condominiums, by right, on lots of 8,000 square feet and larger. Maximum density allowed is governed by the General Plan's UR designation at 16 dwelling units per acre, unless otherwise specified by specific General Plan or zoning indicators which provide for less density. Height limitations allow at least four, and potentially five floor levels. Typically, R-3 build-out densities occur at the General Plan maximum of 16 units per acres.

Residential Holding Capacity

The County has calculated the total amount of land potentially available for residential development according to allowable gross General Plan densities and the amount of available land with moderate to high development potential. Exclusive resource lands, such as full-time agriculture, timber and resource protection land are not included in this inventory. Such resource lands account for nearly half of Shasta County's private land inventory but only 12% of its full build-out population.

The zero vacancy, year-round ultimate population capacity in unincorporated Shasta County's non-resource land use designations is calculated to be 234,023. Allowing for seasonal homes and vacancy rates this number is reduced to 205,851 to 210,547, more than enough for the 113,538 unincorporated projected population through the year 2000.

There is no shortage of potentially developable land in Shasta County. The significant concern is how to provide municipal or on-site services to developing areas of the County so that potentially developable urban and town center lands can be built upon.

Residential holding capacity in the unincorporated area is shown in Table 4-2.

Of the 312,030 estimated potentially developable acres for residential use, 94,800 have been estimated to have moderate to very high suitability for development, based on factors such as soil, slope, transportation, water and wastewater facilities, geology, seismic safety, and flooding. Of these 94,800 acres, approximately 8,400 are designated for non-residential uses, leaving a total of 86,400 acres of residentially-designated land with moderate to very high suitability for development.

Lands which are currently served or could be easily served by community water and sewer services are provided UR and SR land use designations in the General Plan. According to Table CO-3 of the Community Development Element, these readily serviceable residential lands involve approximately 8,000 acres in the South Central Region (Redding) planning area and approximately 2,000 acres in the North East (Burney and Fall River areas) planning area. Based on existing build-out land use patterns, these acreage could accommodate approximately 40,000 dwelling units, or between 100,000 to 108,000 persons, if fully utilized. Based on the 1990 Census, these same areas are estimated to have a population between 27,000 and 30,000.

TABLE 4-2

GENERAL PLAN RESIDENTIAL HOLDING CAPACITY

Designation	Average Density	Acres	Units	Population
UR (Multi-Family)	16 units/acre	3	48	130
	12 units/acre	112	1,344	3,629
	9 units/acre	57	513	1,385
	8 units/acre	56	448	1,210
UR (Single Family)	4.5 units/acre average ... but individual lands may be up to 16 units / acre	2,505	11,273	30,436
ER	3 units/ acre	74	222	599
SR	1.5 units/acre	17,002	25,503	68,858
RA	1 unit/4 acres	94,248	23,562	63,617
RB	1 unit/10 acres	179,032	17,903	48,339
Ac-g	1 unit/5 acres	18,941	3,788	10,228
TOTAL	1 unit/3.6 acres	312,030	86,675	234,023

Note 1: The UR designation allows maximum density indicators, such as UR-8, UR-9, UR-12 or UR-16. The maximum density allowed in an UR designation with no indicator is 16 units/acre.

Note 2: Although the average density in the UR designation for purposes of calculating build-out potential is 4.5 units/acre, the UR designation does permit densities up to 16 units/acre. In terms of zoning, greater than 12 to 16 units/acre is consistent with the County's R-3 multifamily zone district, while 8 to 14.5 units/ acre is consistent with the R-2 multifamily district. Shasta County currently has a total of 178.7 acres zoned as R-3, nearly all which is located in the UR designation and Program 21 has committed to upzoning an additional 103 acres to densities of at least 12 units/acre.

Note 3: Full-time agricultural, timber production and resource protection lands not included.

Source: Shasta County (2)

Recent population growth in Shasta County has averaged less than 1,000 new residential building permits yearly. Table CO-4 of the Community Development Element shows that there are nearly 21,000 vacant residential lots in unincorporated Shasta County. Many of these vacant lots are located on lands designated as rural residential land (RA or RB). Based on discussions with the Assessors Office, it is estimated that approximately 20%, or 4,200 vacant lots exist where water and sewer services are currently served or could be easily serviced. In such serviceable areas, the County's zoning program generally allows densities which are identical to the density allowed by the General Plan.

Over the next five years, sufficient lots appear to exist to accommodate the County's share of expected housing needs. But many of these lots may not be serviceable and, therefore, buildable within the next five years.

Subdivisions

Tentative subdivisions submitted to the County are filed with the Planning Division, which determines their completeness within 30 days of submission. Tentative maps (including tract and parcel maps) are then reviewed by the Staff Advisory Committee (an interdepartmental advisory committee) comprised of a representative of affected County agencies (Planning, Public Works, Environmental Health, the Water Agency (Special Districts) and the County Fire Warden (California Department of Forestry). The Board of Administrative Review or the Planning Commission then conducts public hearings on the proposed tentative map.

Among other requirements, subdividers must provide for safe and sanitary wastewater disposal and drinking water. These two issues, perhaps more than any others, will determine the pattern and size of future subdivisions in the unincorporated areas. Subdivisions will also be limited by the existence of roads providing access to lots. In the General Plan land use designation RB, minimum lot sizes increase if the lots are not within one mile of a paved road.

Other subdivision procedures are completed according to the State Subdivision Map Act (Sections 66410 to 66499.58 of the Government Code) .

Design Review and Improvement Standards

The County controls the improvements required of new development through its Subdivision Improvement Standards manual adopted by the Public Works Department and "Road Policies and Standards" adopted by the Board of Supervisors. These two documents control lot configuration, easements, road design, drainage improvements, sewerage, water supply, fire protection, and other aspects of physical design and facility construction. A brief explanation of these requirements follows.

Road Improvements

The County has classified eight types of roadways based on the number of lots or population to be served. The lowest grade is flag lot driveway, an access road to a public right-of-way serving one lot. The highest grade is arterial, which links highways and has limited access.

In addition, the County has established distinct urban and rural standards for sub-collector through minor-local roads. Urban standards require curbs, gutters, and sidewalks and apply to urban and suburban residential designations. Rural standards allow narrower paved road beds, gravel shoulders, and unlined drainage ditches.

Development Fees

Counties and cities charge for numerous types of development fees, as illustrated by the following:

1. Building Permit
2. Plan Check Fees
3. Water Meter
4. Water Connection
5. Sewer Connection
6. Septic Inspection
7. Storm Drainage
8. Park Acquisition
9. Park Maintenance
10. Construction Tax
11. Traffic Impact Fee
12. Street Improvement Fee
13. School Impact Fee
14. Administration Fee

Generally speaking such fees are higher in cities than in counties because of the difference in sewer, water, and drainage fees. Use of septic systems, individual wells, and surface drainage systems in counties results in a lower development fee, but may result in a higher construction cost. In an area without public sewers the total development fee for a single family dwelling in Shasta County, including school fees, would be in the range of $5,000-$6,000 in 1992. By comparison, a 1992 survey conducted by the City of Anderson Department of Public Works shows cities in the region charging the following fees:

City	Total Fee
Anderson	$ 7,114.00
Red Bluff	8,965.50
Redding	9,469.00
Oroville	12,777.25
Chico	15,999.00

Source: City of Anderson (3).

The County charges a range of permit and development fees. These fees serve two purposes: to recover the administrative cost of processing applications for development approval and to provide a financing mechanism for essential facilities and services that must accompany new development. Since most of the developable sites in rural areas will be served by on-site drainage and wastewater

facilities, sewer construction or hook-up costs for such sites is not an issue. However, septic system costs, including maintenance, can be substantial.

In addition to customary permit fees, the County collects school districts impact fees to recover the costs of temporary facilities to relieve overcrowding in developing areas. The County also charges an "in lieu buy-out" fee for parcels or residences below the 1,000 foot elevation level on unpaved roads. This fee helps to offset the costs of paving roads in rural areas. The Air Quality Management District determined that dust from unpaved roads is a significant source of particulate air pollution below 1,000 feet.

TABLE 4-3

PLANNING DEPARTMENT FEE SCHEDULE

	Shasta County
Pre-Application Fee	$320
Use Permits	
major	$1600
	$40/hr > 40 hrs
minor	$600
amendments	
of major	$800
of minor	$400
extension of Time	$120
appeal by applicant (planning fee)	$400
appeal by others (planning fee)	$200
appeal, all (BOS fee)	$100
annual compliance monitor	$80 + $40/hr > 2 hrs
Administrative Permit	
all except family care	$400
family care	$280
extension of time	$80
appeal by applicant (planning fee)	$360
appeal by others (planning fee)	$180
appeal, all (BOS fee)	$100
Variance	
all	$720
extension of time	$120
appeal by applicant (planning fee)	$400
appeal by others (planning fee)	$200
appeal, all (BOS fee)	$100

TABLE 4-3 (Continued)

Certificate of Compatibility	
all	$960
extension of time	$120
appeal by applicant (planning fee)	$400
appeal by others (planning fee)	$200
appeal, all (BOS fee)	$100
Reclamation Plan	
stand alone-no mining permit	$2000
	+$40/hr>50 hrs
simultaneous with use permit	$800
amendments	
of major	$800
of minor	$400
extension of time	$120
appeal by applicant (planning fee)	$400
appeal by others (planning fee)	$200
appeal, all (BOS fee)	$100
annual compliance monitoring	$80
	+$40/hr>2 hrs
Plng Dirctors Zoning Interp (written)	$80
appeal to planning commission	$80
Rezoning	
major	$1600
	+$40/hr>40 hrs
minor	$1000
advertise, major (news cost)	$190
advertise, minor (news cost)	$65
appeal of denial (planning)	$400
Williamson Act Contract/ Agricultural Preserve	
new/amended contract	$640
Closed Range	
all	$1600
Land Divisions and Related Items	
4 or fewer parcels	$1280
5 to 49 parcels	$2400+10/lot> 4
50+ parcels	$3200+10/lot>50
extension of time	$240
appeal by applicant (planning fee)	$400
appeal by others (planning fee)	$200
appeal, all (BOS fee)	$100
revised map	$400
reversion to acreage	$400
legal creation verification	$120

TABLE 4-3 (Continued)

legal creation letter	$80
state DRE letter	$80
Property Line Adjustment	
all	$400
appeal (planning)	$120
Certificate of Compliance	
major-large area, complex	$600
	+$40/hr>15 hrs
minor-small area, non-complex	$320
General Plan	
amendments	$3200
	+$40/hr>80 hrs
advertise, major (news cost)	$190
advertise, minor (news cost)	$65
consistence determination	$200
Specific Plan	
adoption/amendment	$3200
	+$40/hr>80 hrs
advertise, major (news cost)	$190
advertise, minor (news cost)	$65
ALUC Plan	
adoption/amendment	$3200
	+$40/hr>80 hrs
advertise, major (news cost)	$190
advertise, minor (news cost)	$65
Environmental Review	
categorical exemption	$40
assessment/negative declaration	$120
assessment/mitigated neg dec	$240
EIR	per contract
EIR administration	$40/hr
	($1000 initial deposit)
mitigation monitoring	$80
	+$40/hr>2 hrs
Grading Permit	$30
Development Agreements	$400
	+$40/hr>10 hrs
Board of Supervisors Agreements	$200
Findings of Fact	$120

TABLE 4-3 (Continued)

Written Land Use Verification	$80
Rehearings	$200 + legal notices
Photo Copies	$.35/copy
Title Reports (from land division files)	$.35/copy + $10
Assessors's Book Pages	per Assessor's charges
Publications and Maps	materials + 25%

Source: Shasta County, 1992 (4).

Building Codes and Enforcement

Presently, the County of Shasta follows the guidelines found in the Uniform Building Code to ensure safe housing. These regulations are enforced through review of all proposed project plans, periodic inspection during construction, and final inspection of completed project.

Building and Housing Codes

Building and housing codes establish minimum standards and specifications for structural soundness, safety, and occupancy. The state housing law requires cities and counties to adopt minimum housing standards based on model industry codes.

Code enforcement within Shasta County is the responsibility of the County's Building Division which is currently enforcing the following uniform codes: Uniform Building Code, Mechanical Code, Uniform Plumbing Code, Code for Abatement of Dangerous Buildings and the National Electrical Code. The County has not adopted amendments to these uniform codes that operate as a significant constraint on the production of affordable housing.

The Housing Code is used for remodels for older homes which allows remodelling with minimum health and safety standards similar to when the unit was first constructed.

Permits are required for new construction and conversions/remodels and the County enforces this requirement. Other enforcement beyond permit requirements is mostly handled by complaint and observation in the field.

C. ENVIRONMENTAL LIMITATIONS

Environmental constraints to new residential development are an important consideration in Shasta County. Some of these limitations, such as the lack of adequate paved roads, wastewater treatment, drainage, or groundwater supply systems can be corrected through the construction of facilities or on-site systems to serve new residences. However, these facilities are costly.

Other limitations are not so easily corrected by on or off-site improvements. These limitations include flooding, soil condition, steep or unstable slopes, fire hazards, seismic activity and the presence of wildlife habitats.

The County has established the development suitability of vacant land based on these natural and artificial (that is, owing to the lack of facilities) limitations. Of the 1.46 million acres of privately-owned, vacant land identified in Shasta County, over 1.36 million, or 93%, is rated as having low development potential in its present form. This does not mean that 93% of the vacant, privately-owned land in Shasta County may not be developed, but that such areas will require special treatment to overcome natural or artificial constraints.

Groundwater Constraints

Nearly 197,000 additional people could be served in the unincorporated portions of Shasta County by known groundwater supplies as calculated by Connerly and Associates, Inc. in 1980. Subtracting the County's population increase through January 1990 of approximately 35,000 persons leaves a capacity of about 162,000. Most of the additional service capacity is located in the South Central Region, which is located within the Redding groundwater basin and served by several large water purveyors, including the Anderson-Cottonwood irrigation district and the Bella Vista Water District.

Air Quality

Many of the public and private rights-of-way in the unincorporated parts of Shasta County are gravel or dirt roads. During the dry season, especially in elevations less than 1000 feet, dust generated from the use of these roads has created a significant source of particulate air pollution. The County has adopted paving standards and an in-lieu fee, described previously, to reduce the pollution from unpaved roads while continuing to allow residential development in such areas.

Wastewater Treatment

With the exception of much of the South Central Region, Burney, and Fall River Mills, unincorporated communities rely on individual septic tanks for wastewater treatment. Such systems require specific soil and water table characteristics to operate effectively and safely.

The only waste treatment system with significant excess capacity is the Redding regional wastewater treatment system; its 1992 excess could potentially serve over 10,000 additional housing units. Planned expansions in the Shasta Dam P.U.D. and Anderson systems will serve another 1,260 units, and minor excess

capacity in the Burney system could serve another 200 to 250 units. Small wastewater treatment systems are operated by the County to serve the communities of Cottonwood and Palo Cedro, where slight capacity exists. In the Redding system, many developing areas do not have sewer mains installed to hook into that system's excess pumping capacity. It is anticipated that the City of Redding will continue to allow newly developing areas designated for annexation to hook into its wastewater treatment system. However, the County does not determine which areas will receive this service.

The development potential of most of the County's ten planning areas is severely limited by lack of community wastewater treatment systems and reliance on individual septic facilities. Development in the Sacramento Canyon, Northwestern Forest, Big Bend, Lassen, Eastern Forest, Eastern Upland and Western Upland planning areas will have to be limited or allowed only at low enough densities to permit extensive land on each parcel for soils adequate for the leach fields. The North East planning area has the potential to accommodate limited development within the Burney and Fall River Mills wastewater systems, although both are small systems.

Fire Protection

Prior to the approval of additional residential development, fire protection must be adequate to serve the new residences. The County enforces fire safety design standards governing building design, vegetation clearance standards, road access and availability of community water, when in a water district service area.

Permit Processing

The timeliness with which the County processes the various permits and applications necessary for residential development can marginally affect the overall cost of housing. The legally minimum processing time for residential project applications in Shasta County is determined by state requirements, including for environmental review and public notice, and by the meeting schedules of the Planning Commission and the Board of Supervisors. The maximum processing time for processing residential development permits is set by state law (California Government Code Sections 65920 et. seq.). The statutory time limit for completion of environmental review and approval or denial of a permit application starts when an application is accepted by the lead agency as complete. The lead agency then has one year in which to approve or disapprove a project for which an EIR will be prepared and six months for projects for which no EIR is required. Applications affecting legislation, such as a general plan amendment or rezoning, are not subject to such time limits for review.

The County currently processes residential development applications in the shortest possible time, given requirements for environmental review, public notice and the schedules of Planning Commission and Board of Supervisors meetings. Further discussion on this subject is contained in Chapter 5.

TABLE 4-4

GENERAL SUMMARY OF RESIDENTIAL ZONING PROVISIONS

SHASTA COUNTY

ZONE	TITLE	USES PERMITTED	MINIMUM LOT SIZE	MINI-MUM YARD SPACE	YARDS	HEIGHT LIMIT	SECOND UNITS	BASIC PARKING REQUIREMENTS
R-1	One-family	One-family residence	6,000 sq. ft.	15%	Front - 20′ Side - 5′/12′ Rear - 15′	30′	Yes	2 per unit
R-2	Two-family	One & two family residences/townhouses	6,000 sq. ft.	20%	Front - 20′ Side - 5′/12′	30′	Yes	2 per unit
R-3	Multi-family	Multi-family or two-family residences	8,000 sq. ft.	20%	Front - 20′ Side - 5′/12′ Rear - 10′	45′	N/A	1.5 per 1 bedroom unit 2 per all other
R-M	One-family mobile home	One mobile home	6,000 sq. ft.	15%	Front - 20′ Side - 5′/12′ Rear - 15′	30′	No	2 per unit
R-R	Rural Residential	One-family residence	2 acres	N/A	Front - 30′ Side - 30′ Rear - 30′	35′	Yes	2 per unit
PD	Planned Development	Any Residential Uses Permitted	DESIGN SUBJECT TO SITE PLAN REVIEW/GENERAL PLAN CONSISTENCY					

Source: Shasta County Planning Division, 1993

Summary of Governmental Constraints

There is presently more than an adequate supply of lots to meet housing needs over the next five years and an abundance of potentially developable land to meet housing needs through the year 2000. However, there is a limited number of potentially developable lots that have moderate to very high development suitability, and only those parcels in the South Central Region (8,536) can be potentially serviced by existing water and wastewater treatment facilities. In addition, the number of lots zoned R-2 and R-3 need to be increased to provide for affordable housing. Programs 20 and 21 intend to have a current inventory of lands and an annual rezoning program which increases land available for medium and high residential densities.

While local governments have little influence on such market factors as interest rates, their policies and regulations do constrain the free operation of the housing market. For the most part, local regulations play a legitimate role in protecting the public's health, safety, and welfare. In some cases, however, local regulations may restrict the operation of the housing market unnecessarily. Examination of the local regulatory structure can highlight those areas of "excessive" regulations where steps can be taken to remove or minimize obstacles to residential development.

Much of the regulation and fees that accompany the development of housing act to increase the cost of housing and constrain the availability of affordable housing. Yet these regulations and fees are needed to protect existing county residents from the otherwise externalize effects and costs of new development. In the case of Shasta County, there is sufficient vacant land in all residential land use categories to accommodate a variety of densities, and the County's regulations do not pose any unnecessary constraints to the production of affordable housing.

The County's zoning ordinance and development standards govern most potential governmental constraints on residential development. Specifically, the County's open space requirements, building height and setbacks, access and parking requirements are controlled by overriding public safety concerns and no actual constraint to the development of housing is posed by these factors, as witnessed by the development of multifamily housing in the R-2 and R-3 zones.

Furthermore, affordable housing for low and moderate income households is very achievable in Shasta County with densities of 16 units per acre and even less. This has been verified by reviewing two apartment projects which were constructed approximately 10 years apart at a density of 16 units per acre. One project includes a 40 unit complex constructed in the very late 1970's in Cottonwood and the other is a 38 unit complex constructed in Central Valley in recent years. After adjusting assessed valuation for housing appreciation to a 1990 comparison, the average rental cost of these two apartment complexes are shown to be well within the range of low income households in Shasta County. Average unit value was shown to range from just under $35,000 to near $40,000. This data shows that based on an 8% average rate of return on an average adjusted per unit value of $35,000 in 1990 dollars, rental costs would be approximately 60% of the County's gross medium rent...a rate which is affordable to low income household.

However, there is a limit in the number of R-2 and R-3 vacant acres and land available with public sewer and water. Therefore, programs 20 and 21 call for the County to increase the number of multiple family zoning acres and to maintain a current inventory of all residentially zoned lands.

D. NONGOVERNMENTAL AND PRIVATE SECTOR CONSTRAINTS

Market Constraints

In addition to governmental and physical/environmental barriers to housing production, there are economic and other circumstances that affect the availability of housing over which local governments have little or no control. Of principal concern are interest rates, construction costs, land costs, and the housing delivery process itself.

Interest Rates

Since the Federal Reserve Board of Governors began targeting the supply of money in October 1979, it has allowed interest rates to "float," that is, to find their optimal market rate. As a result, interest rates have fluctuated dramatically over the past years when compared to the prior thirty years of home finance.

Changes in interest rates can have a dramatic effect on housing affordability. As interest rates rise on the fixed rate loan, from 10% to 16%, the monthly payments increase by 53%, and the percent of Shasta County residents able to afford the loan decreases dramatically. Similar effects result from interest rate changes on an adjustable rate loan.

Land Costs

Land costs are partly a function of economic conditions and partly a result of government land use decisions. Government regulation would most likely affect the unit costs of land in urban or suburban areas where competition for developable land is high. However, large minimum lot sizes in unincorporated rural areas can also result in higher overall land costs even though the cost of land per acre in these areas is generally much lower than in Redding.

Information from the Shasta County Board of Realtors Multiple Listing Service indicates that for an eight month period ending December 31, 1990 a total of 708 vacant parcels sold. The average price was $51,472 for various sizes of property. Almost 70% of all sales were below $44,000 and 44% were below $25,000. These prices compare favorable to subdivision lots sold in the incorporated areas.

Costs associated with the acquisition of land include the market price of raw land and the cost of holding land throughout the development process. These costs can account for as much as half of the final sales price of new homes in very small developments or in areas where developable land is scarce. Among the variables affecting the cost of land are its location, its amenities, the availability of public services, and the financing arrangement made between the buyer and seller.

In addition to the cost of the developable land, new housing prices are affected by the cost of holding land while development permits are processed. The shorter the period of time it takes a local government to process applications for building, the lesser the effect on the final cost of housing, if the housing market remains strong during the period. Permit processing times are discussed earlier in this chapter in the context of governmental constraints on the development of affordable housing.

Construction Cost

A 1983 sample survey of new homes sold conducted by the Construction Industry Research Board (CIRB) showed an average price (including land) of $57,305, compared to an average asking price for existing homes advertised for sale in 1984 of $75,565. The 1990 Census reports that 51% of the owners surveyed valued their residential property at between $50,000-100,000 and a survey of residential sales for 1991 revealed the average residential sale in Shasta County was $108,668.

The Housing Delivery System

The process of housing delivery is difficult to quantify but nevertheless an important consideration in the identification of barriers to housing production. The home building industry in Shasta County is dominated by small independent contractors. The majority of residential developments in unincorporated Shasta County are single homes or small subdivisions. The sensitivity of home building to economic cycles, especially changes in interest rates and family income, makes it difficult for builders to respond rapidly to market changes or anticipate future housing needs. At least a year or more may elapse between the time a builder proposes a development and the time the homes are sold. During this interim period economic conditions can range from highly favorable or extremely adverse sales conditions for the builder.

As a normal cost of doing business, and part of the risk of home building, builders must absorb expenses incurred in failed projects, changes in financing or construction costs, previous projects rejected by the city or county, etc. If the builder is to be successful, these costs must be recovered in future projects. Small builders may face greater difficulties in "weathering" economic cycles because they are likely operating with smaller financial reserve margins than the large builder.

Another important part of the housing delivery process is the ability of builders to pay "up-front" development fees and the costs of installing necessary improvements and facilities.

Unless a builder has a cash reserve or business capital to cover such costs, the builder would have to borrow the needed funds. With the exception of a few builders with a proven track record, the typical builder would have to borrow at non-prime business or personal loan rates in order to pay up-front expenses. This borrowing rate may be 5% to 8% percentage points above the prime commercial lending rate or corporate bond rate. Each added dollar a builder must borrow during construction adds a $1.13 to $1.20 to the cost of building a home,

depending on the rate at which the builder is able to borrow. The difference in cost between developer or mortgagor-financed up-front charges and tax-exempt financing can also be dramatic. For each $1,000 in facilities or development charges financed by a 30-year mortgage at 14% versus a tax-exempt bond at 10%, the consumer pays an additional $2,705 over the life of the loan.

Much of the development in the rural community centers is accomplished through land subdivisions in which owner-investors purchase individual lots to build homes for their own occupancy. Thus, the individual purchasers become a factor in determining where, when, and what kind of housing will actually be constructed after the land subdivision is approved.

The availability of housing is strongly influenced by market factors over which local government has little or no control. State law requires that the housing element contain a general assessment of these constraints. This assessment can serve as the basis for actions which local governments might take to offset the effects of such constraints. The primary market constraints to the development of new housing are the costs of constructing and purchasing new housing. These costs can be broken down into four categories: materials, labor, land, and financing.

Material Costs

A major component of the cost of housing is the cost of building materials, such as wood and wood-based products, cement, asphalt, roofing materials, and pipe. Prices for these goods are affected by the availability and demand for such materials.

Cost of Labor

Another major cost component of new housing is labor. Inflated labor costs due to high wage rates significantly increase the overall cost of housing in some urban area markets. The cost of labor in Shasta County is comparatively low because the area's cost of living is relatively low compared to markets with higher living costs. Also labor is generally less costly because the area is predominantly non-union. Labor in highly unionized markets is typically more expensive.

Cost and Availability of Financing

The cost and availability of capital financing affect the overall cost of housing in two ways. First, when the developer uses capital for initial site preparation and construction and, second, when the home buyer uses capital to purchase housing.

The capital used by the developer is borrowed for the short-term at commercial rates, which are considerably higher than standard mortgage rates. Commercial rates nonetheless drop when the overall market rates decrease. Low interest rates have a positive effect on the housing construction market.

The home buyer uses capital financing in the form of long-term mortgage loans. Market rates for standard home loans have in recent years dropped to about ten percent and less, so current financing costs generally favor the buyer. Table 4-5

shows how the variation in interest rates affects the buyer's monthly mortgage payments on a range of loan amounts and Table 4-6 lists the income requirements to qualify for most of the loans.

Table 4-5

MONTHLY MORTGAGE PAYMENTS

Loan	Rate	Amount	Rate	Amount	Rate	Amount
$70,000	8%	513.80	9%	563.50	10%	614.60
$80,000	8%	587.20	9%	644.00	10%	702.40
$90,000	8%	660.60	9%	724.50	10%	790.20
$100,000	8%	734.00	9%	805.00	10%	878.00
$120,000	8%	880.80	9%	966.00	10%	1053.60
$140,000	8%	1027.60	9%	1127.00	10%	1229.20
$180,000	8%	1321.20	9%	1449.00	10%	1580.40

Note: Based on a 30-year, fixed-rate mortgage, not including real estate taxes, insurance, or mortgage application costs.

Source: Hulse and Associates, 1992

With the median family income at $30,332 a very low income family would qualify for a $15,166 loan, a low income family would qualify for a $15,166-24,266 loan, a moderate income family would qualify for a $24,266-36,386 and an above moderate income family would qualify for a loan above $36,386, if based solely on income.

Table 4-6

YEARLY INCOME REQUIRED

Loan	Rate	Monthly Amount	Yearly Amount	Yearly Income Required @25%	Yearly Income Required @35%
$70,000	8%	514	6,168	24,672	17,622
	9%	564	6,768	27,072	19,337
	10%	615	7,380	29,520	21,085
$80,000	8%	587	7,044	28,176	20,125
	9%	644	7,728	30,912	22,080
	10%	702	8,424	33,696	24,068
$90,000	8%	661	7,932	31,728	22,662
	9%	725	8,700	34,800	24,857
	10%	790	9,480	37,920	27,085
$100,000	8%	734	8,808	35,232	25,165
	9%	805	9,660	38,640	27,600
	10%	878	10,536	42,144	30,102
$120,000	8%	881	10,572	42,288	30,205
	9%	966	11,592	46,368	33,120
	10%	1,054	12,648	50,592	36,137

Source: Hulse and Associates, 1992

Financing Availability

The availability of financing is another important consideration, particularly for the builder. The cost of financing is irrelevant if lenders are unwilling to lend money to developers in a particular market.

There does not appear to be any mortgage deficient areas in the County of Shasta as local realtors, the Shasta County Board of Realtors Multiple Listing Service, the Shasta Housing Development Corporation, and Legal Services of Northern California were unaware of any such areas.

Chapter 4 Footnotes

(1) Shasta County General Plan Appendix D, Table 37.

(2) Shasta County Department of Resource Management, Planning Division, Total General Plan Designation Acreage, 1991.

(3) City of Anderson, Department of Public Works Development, Fee Survey.

(4) Shasta County Fee Schedule Board of Supervisors Resolution 91-105.

7.3.5 REVIEW OF PAST HOUSING ELEMENT IMPLEMENTATION

A. INTRODUCTION

This chapter provides a review of the County's Housing Element implementation for the period of 1985 to 1991. This review is required by Government Code Section 65588(a) as part of the overall revision of this Element.

B. REVIEW of METHODOLOGY for DETERMINING ADEQUATE SITES and ANALYSIS

The methodology used to determine adequate sites includes the following: (1) determining the number of vacant parcels available; (2) a comprehensive review of the government review process and fees; (3) identification of available infrastructure, and housing development costs.

Shasta County had designated sufficient land to accommodate nearly 87,000 new housing units in 1985. This was far more than enough land to accommodate the 7,000 additional housing needed for the 1984-1992 planning period. It would be very time consuming to quantify how many parcels have been approved and finaled by the parcel map and subdivision process, and the relationship of approved and finaled parcels relationship to zoning, because the record systems of the Department of Resource Management and Department of Public Works are not comparable. However, reasonable estimates can be made, especially when one considers the need for housing sites and the over abundance of land available in Shasta County.

By utilizing available information, it has been determined that the County approved 3247 parcels involving 5188 acres with an average density of 1.6 acres per parcel through the subdivision map process for the 28 month period between December 1989 and April 1992. When one considers the effect of a recession during this period, it is clear the County has approved more than enough parcels to meet demand during the review period. However, as noted in the adopted Housing Element, although sufficient sites are available for anticipated growth, it is unlikely that very low, low, moderate, and above moderate income groups needs would be met without below market rates and government subsidies because of constraints associated with the costs of land, construction and financing.

In 1985, sewer and water facilities were anticipated to be expanded utilizing Mello-Roos Community Facility Districts and Farmers' Home Administration long-term loans. Although these programs were not utilized, development or expansion of sewer systems in Cottonwood and Central Valley was accomplished with State revolving loan funds. Also, the County continues its practice of approving housing development utilizing individual septic systems on rural residential lots. These practices helped increase the availability of parcels for housing development.

Government Constraints

The County revised its Zoning Ordinance in 1986. General Plan policy and the zoning ordinance recognize the need for providing density bonuses for low cost housing as prescribed by Government Code Section 65915. In addition, the zoning ordinance contains a mobile home combining district which is found in extensive areas of the County's rural residentially designated lands. Mobile homes are also allowed in all one-family zones when placed on foundations. Finally, the County continues to provide opportunities for senior citizen housing and for family care mobile homes that supply temporary housing for the elderly and those in medical need.

Consolidation of the building, planning, environmental health and air quality functions has been accomplished with the creation of the Department of Resource Management. The Building Division provides for zoning, building and grading permit enforcement. Seven field inspectors are cross trained to handle zoning and grading enforcement, as well as normal building inspection duties. In addition, the Division has one full time zoning enforcement position.

Standard development conditions have been developed for use permits, subdivision and parcel maps, and property line adjustments. These standard conditions make it possible to process use permits and parcel maps generally in 10 to 12 weeks and subdivisions in similar times, depending on complexity.

Administrative permits are typically issued in 4 to 6 weeks, building permits for a single family residence in 2 to 4 weeks and rezones in three months or longer, depending on complexity.

The County has implemented handicapped access beyond CCR Title 24 requirements for housing projects administered by the County's Community Action Agency. Provisions for encouraging builders to provide at least one percent of new housing units with handicapped access have not resulted in the construction of such units.

Technical assistance to developers for government programs has been implemented by the Community Action Agency. Population, housing and socio-economic statistics are made available by the Resource Management Department's Planning Division.

The County provides use permit approvals for second single-family units for permanent use when the General Plan density can be met and also for temporary uses for the medical home care of relatives.

Housing Stock and Rehabilitation

The County continues to seek Federal and State funding for expansion and improvement of the housing stock. The Community Action Agency's efforts have been rewarded with Community Development Block Grants (CDBG) for the years 1983-84 totalling $960,000 and 1988-1991 totalling $1,840,000. The 1983-84 grants resulted in 59 rehabilitated units in 1985; 20 in 1986; and, 5 in 1987 for a total of 84 during the planning period. The 1988-1991 grants have resulted in the following rehabilitated units: 1988 - 5; 1989 - 30; 1990 -40; 1991 - 31; 1992

(to date) - 10 for a total of 116 during the planning period. The total of 200 units have equally assisted low income and very low income persons, according to data furnished by the Shasta County Community Action Agency. CDBG Technical Assistance Grants were obtained in 1989 to complete a Housing Conditions Survey, in 1990 to conduct a household water study and prepare a feasibility study for formation of a housing development corporation, and in 1991 to fund application for an affordable housing development grant.

Other rehabilitation grants obtained by the Housing Authority include:

1. California Housing Rehabilitation Program (CHRP-O) grants obtained in 1989 and 1990 totalling $600,000 to improve 40 housing units.

2. Rental Rehabilitation grants administered by HUD and HCD for the years 1987-1991 totalling $900,000 to rehabilitate 300 units.

3. California Self-Help Housing Program (CSHHP) obtained in 1988 for $182,000 to improve 20 housing units.

The Housing Authority also utilizes revolving CDBG funds for its Minor Home Repair Program that provides minor repair to senior homeowners units. Over 200 units have been repaired by this program which will fund repair of 100 units per year in the future.

The CDBG program income also funds improvement to 20 low-income mobile homes per year through the Mobile Home Repair Program.

Table 5-1
HOUSING REHABILITATION SUMMARY
1985-1991 Planning Period
Shasta County

Program	Amount, $	Units Rehabilitated
CDBG	$2,800,000	200
CHRP-O	600,000	40
HUD/HCD Rental Rehab	900,000	300
CSHHP	182,000	20
Revolving CDBG (Home)	100,000	200
Revolving CDBG (Mobile Home)	10,000	20
Total	$4,592,000	780

Source: Shasta County Housing Authority, May 1992.

Homeownership

Mortgage Revenue Bonds were issued when Shasta County and the City of Redding signed a joint Powers agreement under the Redding-Shasta Home Finance Agency.

In 1990 and 1991 a total of 29 Mortgage Credit Certificates were issued to first-time home buyers through the County Mortgage Credit Certificate Program.

Since 1985 Shasta County has approved seven (7) housing development projects amounting to 280 FMHA units. Building permit activity for the planning period is shown in Table 5-2.

Table 5-2
BUILDING PERMIT ACTIVITY
Shasta County
1985-1991

Year	SFD	MHF	MHI	Total
1985	378	not counted	86	464
1987	493	15	167	675
1988	428	13	165	606
1989	515	18	180	713
1990	588	43	184	815
1991	442	35	148	625
Totals	2,844	124	930	3,898

SFD - Regular construction, single family unit
MHF - Manufactured housing with standard foundation
MHI - Manufactured housing with mobile home installation

Source: Shasta County Resource Management Department, Building Division, March, 1992.

Table 5-3
OWNERSHIP CONSTRUCTION SUMMARY
1985-1991 Planning Period

Activity	Constructed Units
Building Permits	2,844
Mortgage Revenue Bonds	80
Mortgage Credit Certificates	29
Farmers Home Agency (FMHA)	280
Manufactured Homes with Permanent Foundation	124
Manufactured Homes with Mobile Home Foundation	930
Total	4,287

Source: Shasta County Resource Management Department, Planning Division, 1992.

Rental Housing

In 1985 the unincorporated area of the County had 285 units in which lower income renters were partially subsidized under the Section 8 Program of the U.S. Housing Act of 1937 (as amended in 1974). This increased to 345 in 1987, 450 in 1988, 470 in 1990, and to 515 in 1992. The result is an increase of 230 Section 8 units during the planning period.

The Housing Element Objective H-1 identified a quantified objective of 7,000 dwelling units during the period 1984-1992. This amounts to 875 units per year. Within the five-year period 1985-1989 (the effective period of the existing element) the same objective (H-1) calls for 4,380 units in the same proportion as for the 1984-1992 period which identified the following:

	%
Very low (50% or less of median household income or MHI)	25
Low (50-80% of MHI)	20
Moderate (80-120% of MHI)	23
Above moderate (120% or more of MHI)	32
Total	100

Review of the existing element covers the effective period 1985-1991 to cover the years from the year of adoption through the last complete calendar year before the current draft updated Housing Element was started. Therefore, for the effective seven (7) year period, the total dwelling units planned (7 years x 875 units/year) equals 6,125 dwelling unitas shown on Table 5-4.

Table 5-4

QUANTIFIED OBJECTIVES - 1985 to 1991

Income Group	Quantified Objective
Very Low Income	1531 Units
Low Income	1225 Units
Moderate Income	1409 Units
Above Moderate	1960 Units
Total	6125 Units

Source: Shasta County General Plan, Housing Element, 1985.

Objective H-1 also called for 6% of the very low income units and 18% of the low income units to be affordable to large families. This results in 92 of the 1531 very low income units for the effective period called to be affordable to large families.

Based on available data, Shasta County was quantifiably successful in implementing its Housing Element as shown in Table 5-5.

Table 5-5
QUANTIFIED OBJECTIVES RESULTS
EXPRESSED IN HOUSING UNITS
Effective Period 1985-1991

Income Group Difference	Quantified Objective	Results	% of Results
Very Low Income	1531	808*	16.5
(large families)	(92)		
Low Income	1225	1204*	24.7
(large families)	(220)		
Moderate Income	1409	1456*	29.8
Above Moderate	1960	1416*	29.0
Total	6125	4884*	100.0

Source: Hulse and Associates, 1992 * See Table 5-6 for assumptions and details

Table 5-6
ESTIMATED HOUSING OBJECTIVE RESULTS
EXPRESSED IN HOUSING UNITS

Program	Results Very Low	Low	Moderate	Above
1. Table 5-1 Rehabilitation Programs (50% very low, 50% low)	390	390	0	0
2. Table 5-3 MCC (20% low, 40% moderate, 40% above)	0	5	24	0
3. Table 5-3 FMHA (50% very low, 50% low)	140	140	0	0
4. Table 5-3 Mortgage Revenue Bonds (50% low, 50% moderate)	0	40	40	0
5. Building Permits other than 2, 3, 4 above (5% very low, 15% low, 40% moderate, 40% above)	123	368	982	982
6. Manufactured homes with Permanent Foundations(ie, building permits)	6	18	50	50
7. Manufactured homes with Mobile home Installation(ie, building permits)	46	140	372	372
Total	705	1101	1468	1404

Source: Hulse and Associates, 1992

Shelters and Transitional Housing

In 1991 the Shasta Housing Development Corporation was created by the Shasta County Housing Authority. It administers the following programs:

1. McKinney Transitional Housing Program. $400,000 for the purchase and operational expense of a 16-unit and a six-unit transitional housing facility. 440 homeless individuals a year are assisted and 38,500 shelter nights are provided.

2. State Emergency Shelter Program (ESP). $200,000 for the purchase and operation of a four-unit transitional housing facility. 60 homeless persons are served and 6,500 shelter nights a year are provided.

3. Federal Emergency Shelter Grant (FESG). Operational expense for the three facilities named above ($120,000).

Support to non-profit housing programs is provided by funds derived from the Community Services Block Grant (CSBG) and the Emergency Homeless Program (EHP) provided by the State Department of Economic Opportunity in the following amounts (most recent data):

1. $10,000 a year to the Salvation Army for a winter homeless shelter. 1,234 individuals are served and 7,300 shelter nights a year provided.

2. $40,000 a year to People of Progress for an emergency food and shelter assistance program. 600 individuals are served.

3. $10,000 a year to the Shasta County Women's Refuge for a shelter for victims of domestic violence. 588 persons are served and 7687 shelter nights a year provided.

4. $3,000 a year to the Catholic Social Services for a home for homeless mothers. 200 persons are served and 4,498 shelter nights a year provided.

5. $30,000 a year to the Shasta Housing Development Corporation for ownership and management of 26 units of transitional housing. 500 individuals are served and 45,000 shelter nights a year provided.

6. $7,500 a year to Project Match, administered by the non-profit agency Golden Umbrella. This home-sharing program provides housing to approximately 100 individuals a year.

The County sought new Article 34 authority during the June, 1992 elections, but the electorate rejected the proposal.

Energy Conservation

Title 24 energy requirements are applied by the Building Division. The 1992 General Plan update is proposing a revised Energy Element which focuses on conservation and energy efficiency in land development patterns.

C. CONCLUSIONS

Shasta County has made a good faith effort to provide its share of the regional housing needs. However, the results of hard work, initiative, and innovation were accomplished by separate and unmonitored actions of independent bodies. While the cumulative effect is positive, the continued long term results cannot be depended upon. In response, the revised plan recognizes and provides for a more coordinated and monitored process.

Shasta County has obtained grants to provide for regional housing needs. This success will not be possible in an environment that has fewer funded programs and more competition. The revised plan identifies the need to increase involvement of the private sector in the planning and implementation of Shasta County's regional housing needs.

A lack of basic information and data makes it difficult to assess and meet the needs of all special groups in the County. The revised plan provides action programs to address this deficiency.

7.3.6 FUTURE HOUSING NEEDS AND CONSTRUCTION OBJECTIVES

This Chapter highlights and summarizes social economic, household and housing needs data from previous chapters and then provides a quantified assessment of future housing construction needs in unincorporated Shasta County.

A. SUMMARY OF EXISTING NEEDS CONDITIONS

According to the 1990 Census, Shasta County had 55,966 households with a population of 144,318 persons. Total Countywide population was 147,036. The unincorporated area of Shasta County had 29,861 households with a population of 71,384 persons. Unincorporated Shasta County had 53% of the households and 49% of the population.

Countywide households projections to year 2010 are found in Table 6-1.

TABLE 6-1
PROJECTED HOUSEHOLDS
Shasta County

Year	Persons In Households	Households
1990	144,318	55,966
1995	162,568	62,895
2000	177,636	69,122
2005	189,731	74,751
2010	201,691	80,325

Source: California Department of Finance, 1991.

A summary of the housing market conditions (Chapter 7.2) and the housing characteristics and needs (Chapter 7.3) provides a comparison of the 1980 Census to the 1990 Census and the following facts:

1. Unincorporated Shasta County resident's median age is higher than the County average and has increased since 1980.

2. Unincorporated Shasta County has a comparatively small minority population (91.7% white to 8.3% other).

3. Unincorporated Shasta County has a high unemployment rate (8.4% to State average 5.6%), or typically about three percent higher than the current Statewide unemployment rate.

4. Unincorporated Shasta County's employment base is slowly diversifying (Government from 19.8% to 16.2% and retail trade from 21.5% to 19.2%).

5. Average family incomes have increased in the unincorporated area ($20,197 to $36,301), but the percentage of persons below the poverty level has increased from 8% to 12.7%.

6. Housing values have increased in unincorporated Shasta County (Valued over $100,000: 10.3% to 46.4%).

7. Unincorporated Shasta County housing costs have almost doubled (Owners monthly mortgage: $350 to $668 and rents : $250 to $406).

8. The percentage of households paying 25% or more of their income for housing in unincorporated Shasta County has increased (Renters 26.7% to 56.4% and owners 17.8% to 28.0%).

9. The percentage of renter occupied units Countywide has increased (32.7% to 35.5%) while the percentage of single family dwellings has increased (63% to 65%) and the percentage of multi-family units has decreased (17% to 16%). Renter occupied units comprise only 23.2% of the total units in unincorporated Shasta County. This is in large part due to annexations of multi-family units, mainly around Redding.

10. The average age of the County's housing stock has improved as the percentage of housing constructed after 1950 increased (65% to 78%).

11. 58% of the housing stock in unincorporated Shasta County is sound. Meanwhile, 42% is substandard, with 15% needing moderate repair, 23% needing major repair, and 4% dilapidated and beyond feasible repair.

12. Vacancy rates in the unincorporated area have declined in rentals (7.3% to 7.2%) and increased in homeowner units (2.4% to 3.0%).

13. Overcrowding in unincorporated Shasta County has increased (3.9% to 5.0%).

14. The percentage of persons with a work disability in the unincorporated area has increased (7.4% to 13.7%) and the percentage of persons with a mobility limitation has also increased (2.7% to 9.2%).

15. In Shasta County the percentage of elderly persons 60 years and older accounts for 18.8% of the unincorporated population. Large families have declined Countywide (13.5% to 9.9%) while in the unincorporated area large families have increased (13.9%).

16. The number of female headed households in the unincorporated area has declined (16% to 15.4%) and the number of female headed households below the poverty level has increased (32.4% to 36.0%).

17. The number of homeless persons in Shasta County has increased and facilities and funding to meet their needs have also increased (See list of facilities in Chapter 7.3).

18. Energy costs in Shasta County have increased (Electricity 6.4 cents to 11.4 cents per kilowatt since 1984 and natural gas 51.2 cents to 51.9 cents since 1984).

B. SHARE OF PROJECTED REGIONAL NEEDS

State planning law requires every housing element to provide projections of new housing units that need to be constructed to serve the needs of all income groups of the projected population. To assist cities and counties, the State has assigned each council of governments responsibility for determining the existing and projected housing needs for its region. In areas without a council of governments, like Shasta County, the State Department of Housing and Community Development (HCD) determines these needs.

The HCD prepared the Regional Housing Needs Plan for Shasta County that covers the period January, 1991 to July, 1997 pursuant to the provisions of Government Code Section 65584. This Needs Plan was adopted June 28, 1991 and became effective September 27, 1991. The Plan assigns a Countywide share of the statewide housing need to July, 1997 and allocates shares of that need to the County of Shasta and the Cities of Anderson and Redding. The purpose of this Plan is to provide the local governments in Shasta County with their shares of the countywide housing need for inclusion in their housing elements by July 1, 1992.

Existing housing need is shown in Tables 6-2 and 6-3. In Table 6-2, the "January 1, 1991" column shows the number of households, by income, who needed adequate housing as of the base date of the Plan. Table 6-3 shows the number of additional housing units needed, including by income needs, for a healthful functioning housing market that includes consideration of a minimum desirable vacancy and replacement rate. Combined, Tables 6-2 and 6-3 contain projections of need, by income, for the number of additional households Shasta County is to plan for (Table 6-2) and construction needed to accommodate the additional households by July 1997, including an allowance for normal market removals (Table 6-3).

TABLE 6-2
HOUSEHOLD PROJECTIONS BY INCOME GROUP
January 1, 1991 TO July 1, 1997
Shasta County, Unincorporated

Jurisdiction and Income Group	January 1, 1991 Number	%	July 1, 1997 Number	%	Jan 91-July 97 Number	%
Very Low	6,421	23.7	6,921	23.9	500	27.6
Other Lower	5,064	18.7	5,412	18.7	348	19.2
Moderate	5,366	19.8	5,729	19.8	363	20.0
Above Moderate	10,291	37.9	10,894	37.6	603	33.2
Total	27,142	100.0	28,956	100.0	1,814	100.0

Source: California Department of Housing and Community Development (1)

TABLE 6-3
BASIC CONSTRUCTION NEEDS
January 1, 1991 to July 1,1997
Shasta County, Unincorporated

BY COMPONENTS	Units
Household Increase	1,814
1991 Vacancy Need	-28
1997 Vacancy Need	233
Replacement Need 1991-1997	412
Total	2,431
BY INCOME GROUP	
Very Low	671
Other Lower	467
Moderate	486
Above Moderate	807
Total	2,431

Source: Department of Housing and Community Development (2)

Later Changes In The Needs Plan

Effective January 1, 1991, Government Code Section 65584(c)(5) provided for the ability to amend the Needs Plan under specified conditions that permit the transfer of a portion of a county's allocation to one or more cities within the county. The transfer must meet the standards applicable to the original allocation of local shares of regional need and have the approval of the county, the affected cities, and the Department of Housing and Community Development. Events which might lead to use of these provisions include major changes in the local economy, changes in annexation policies or agreements, and the incorporation of a new city.

C. ALLOCATION OF HOUSING CONSTRUCTION OBJECTIVES

Quantified housing construction objectives are provided below for each income group and by type of housing. Shasta County has stated objectives by type of housing consistent with state law effective January 1, 1991. Because this is the first time Shasta County has stated its objectives by type of housing, caution is prudent. The County has no history to rely on that would provide a statistically valid projection base. Absent this stastistical base Shasta County will use its best available data and assumptions for its projections to meet the regional allocations provided to the County by the Housing and Community Development Department.

During the last planning period the County had 3898 (80%) new housing units constructed and 986 (20%) housing units rehabilitated. There were no housing units conserved. Shasta County has decided to plan for 75% new construction, 20% for rehabilitation, and 5% for conservation efforts for the new planning period for very low, low, and moderate income groups. Above moderate income groups have more financial options and, therefore, the County has decided to use 90% for new construction, 10% for rehabilitation, and 0% for conservation.

Quantified objectives by income group and by type of housing are shown in Table 6-4 and the Five (5) Year Plan showing quantified objectives by type is illustrated in Table 6-5. Meeting these objectives is dependent upon the assumptions that follow Tables 6-4 and 6-5.

TABLE 6-4
CONSTRUCTION OBJECTIVES BY TYPE
1991-1996

Income Group	%	Objective	Quantified Objective By Type New	Rehab	Conserve
Very Low	27.6	671	503	134	34
Low	19.2	467	350	93	24
Moderate	20.0	486	365	97	24
Above Moderate	33.2	807	726	81	0
Total	100.0	2,431	1,944	405	82

Source: HCD, 1991 and Hulse and Associates, 1992

TABLE 6-5
FIVE YEAR CONSTRUCTION OBJECTIVES
1991-1996

5 Year Plan Activity	Yr 1	Yr 2	Yr 3	Quantified Objectives Yr 4	Yr 5
New	389	389	389	389	388
Rehab	81	81	81	81	81
Conserve	16	16	16	18	18
Total	486	486	486	486	487

Source: Hulse and Associates, 1992

In the process of developing these housing construction targets, the County has taken into consideration the following assumptions:

1. State and Federal funds will be available.

2. Competition for State and Federal funds will be the same for Shasta County in the new planning period as in the last planning period.

3. Shasta County will be as successful in obtaining CDBG grants in the new planning period as it was in the last planning period.

4. The State will give more authority to local governments to establish new taxes and fees without adding additional unfunded or underfunded mandates.

5. Shasta County's economic and budget constraints will be of relatively the same difficulty during the new planning period as in the last planning period.

6. Shasta County will be successful in adopting and implementing the "Ladder of Success" and "Ladder of Independence" philosophies contained in Chapter 7.7. If the County is successful the percentages and real numbers for new construction and rehabilitation efforts will change for very low, low, and moderate income groups. These numbers will be reviewed yearly as a part of the monitoring program to be established by the County.

7. Shasta County will be successful in adopting and implementing the programs dependent upon public/private cooperation and everyone expecting and taking less to create affordable housing.

8. Shasta County will be successful in adopting and implementing the program calling for targeting new high density development areas.

9. Shasta County will be successful in adopting and implementing the program calling for more involvement of private non-profits.

7.3.7 HOUSING ACTION PLAN

A. INTRODUCTION

The Housing Action Plan is intended to guide the County's housing efforts through July 1, 1997. This section provides goals, policies and programs to assure that Shasta County addresses the need to expand, rehabilitate, conserve, and preserve its housing stock. It recognizes the limitations of government in solving housing needs and encourages and promotes the innovation and cooperation of the private sector to improve the variety and type of housing available in Shasta County, including housing for the economically handicapped and deprived. Included are provisions to address the County's need to provide adequate sites for future housing needs, remove government and private sectors constraints when feasible, and meet special housing needs. Finally, the Action Plan promotes energy conservation and fair housing.

If Shasta County is to meet its future housing needs, more cooperation, partnerships and enterprise between government and the private sector will have to take place. Government funded programs at both the Federal and State levels are diminishing and non-metropolitan area local governments are facing ever more significant budget cuts. To meet future housing needs, local government will likely be forced to take on an increasingly educational and facilitative role, depend less on grants, and depend more on fees, taxes and the private sector for funding and innovation.

B. HOUSING GOALS

Shasta County recognizes its civic responsibility and legal mandate to promote fair and decent housing for all economic segments of the community and will, where possible and to the extent possible, promote, preserve, conserve, improve, and provide for housing opportunities and housing development within the land resources, financial resources , and local constraints it must consider. Therefore, it shall be the goal of Shasta County to:

1. Make adequate provisions for the housing needs of all economic segments of the community.

2. Remove government and non-government constraints, as appropriate, which may hinder or impede housing development.

3. Provide for its existing and projected fair share of the region's housing needs.

4. Identify adequate sites for housing developments for home ownership and rental units, including manufactured housing, to meet identified needs.

5. Promote housing opportunities without bias or prejudice.

6. Preserve, conserve, and improve the affordable housing stock and assisted housing.

7. Provide for a balance between job creation and housing.

8. Promote energy conservation opportunities.

9. Provide for special housing needs.

10. Establish and implement policies and programs throughout the five year planning period to preserve, improve, and provide for the development of housing to accomplish quantified objectives.

C. HOUSING POLICIES AND PROGRAMS

This section provides sets or grouping of housing policies and programs which provide the framework for Shasta County's housing efforts during the next five years.

Scope and Organization of Policies and Programs

The following policies cover a range of actions Shasta County intends to take towards attainment of its housing goals. These policies will help guide and maintain consistency in the programs Shasta County intends to use to implement the Housing Element. They are organized topically in the following six policy groups:

Policy Group H-a: Housing Stock, Variety and Type

Policy Group H-b: Adequate Sites

Policy Group H-c: Constraints

Policy Group H-d: Special Needs

Policy Group H-e: Energy Conservation

Policy Group H-f: Fair Housing

The above policy groups contain one or more topical subheadings among which may include policies which are focused on: (1) government actions; (2) assistance; grants and financing; (3) incentives and bonuses; (4) intergovernmental cooperation; (5) public-private cooperation; and (6) public information efforts.

Related Housing Element programs are found following each policy group. Some programs may actually respond to several policy groups, but in order to reduce redundancy, they are placed under the most appropriate policy grouping. A general description of each program group is followed by an assessment of need and limitations based on housing construction projections found in Chapter 7.3.6. Table 6-4 and 6-5 show allocation of housing construction needs based on income group and construction type. Included for each specific program is a description, statement of administrative responsibility, estimated time frame and potential source(s) of funding, as outlined in Chapter 7.3.0. Whenever specific support or actions of the Board of Supervisor's is envisioned to enable a proposed program, the Board is listed following the County agency responsible for the activity.

I. HOUSING, STOCK, VARIETY and TYPE

POLICY GROUP H-a: PROVIDE HOUSING STOCK, VARIETY and TYPE TO:

A. Government Action

1. Provide for a variety of alternative housing types and construction and the use of alternative, innovative, and appropriate technology.

2. Encourage builders to propose new developments containing a mixture of housing types affordable to lower, moderate, and upper-income groups.

3. Ensure an adequate supply of affordable housing for all economic segments of the community.

4. Promote the provision of housing for all economic segments of the community to ensure the highest possible quality in all new residential development.

5. Continue to provide opportunities for the use of manufactured housing to help meet the housing needs of County residents.

6. Provide for the development of secondary residential units, as required by state law, while protecting the single-family character of neighborhoods.

7. Ensure that a full range of housing types in sufficient supply is available near major employment centers.

8. Provide for the construction and maintenance of all types of housing based on standards that maintain public health and safety and conserve natural resources without necessarily increasing the cost of housing.

9. Accommodate housing in areas where public and private services are adequate or can be cost-effectively extended and the development of housing is consistent with established land use guidelines.

10. Encourage private reinvestment in older residential neighborhoods and private rehabilitation of housing.

11. Strive to provide for its share of the region's housing needs.

12. Provide for low cost housing opportunities to reduce overcrowding and the price of housing.

13. Promote home ownership in new housing constructed for low and moderate income households.

14. Improve the condition of low and moderate income housing in Shasta County.

15. Support the revitalization of older neighborhoods by keeping streets and other municipal systems in good repair.

16. Promote the continued upkeep of existing mobile home parks.

17. New residential projects shall be designed to also facilitate and leave options for non-automobile modes of travel.

18. Higher density housing shall be located in areas served by the full range of urban services and near public transit routes and employment centers.

B. Assistance, Grants, and Financing

19. Continue to seek State and Federal funding for expansion and improvement of the housing stock.

20. Pursue all available State and Federal funding assistance that is appropriate to the needs to develop housing that is affordable to low-and middle-income households.

21. Pursue all available State and Federal funding assistance that is appropriate to meet its needs to rehabilitate housing. Housing rehabilitation efforts shall continue to be given high priority in the use of Community Development Block Grant (CDBG) funds.

22. Utilize available techniques, such as mortgage revenue bonds or other mortgage-backed securities, to develop affordable housing.

23. Continue applying for needed housing technical assistance grants.

C. Incentives and Bonuses

24. Provide incentives to developers to construct housing affordable to low and moderate income households.

25. Require that residential units which are conditioned to sell or rent at below-market-rates be included within a housing development. Such units shall be interspersed within the development and shall be visually indistinguishable from market-rate units.

26. Stipulate that if below-market-rate units are included in a project pursuant to the density bonus program or other local, state, or federal requirements, buyer/renter eligibility screening and resale/rent controls for at least 10 years be required to maintain affordability of the units for originally-targeted income groups.

D. Public/Private Cooperation

27. Continue to work with non-profit organizations through the Housing Authority.

PROGRAM GROUP H-a: STOCK, VARIETY and TYPE

Shasta County recognizes that the two main methods used to provide affordable housing are to provide government subsidies or privately constructed housing at below market rate. To the degree local government is able to control subsidies, or can influence conditions to provide housing at below market rate, Shasta County will cooperate with the private sector to maximize benefits derived from subsidies and promote below market rate programs to help the private sector meet its responsibilities.

Successful housing programs that meet the needs of the very low, low, and moderate income groups currently depend on subsidies of one kind or another. This trend will continue until programs are established that produce more jobs with adequate wages for these groups, thereby diminishing the need for housing assistance. Shasta County recognizes the need to work with the private sector and encourage employers to participate in solving the housing needs to the extent that they create. At the same time Shasta County will work with the private sector to help respond to these same needs and improve its job/housing balance.

Jobs provide people with the pride and income to be self sufficient and they reduce the need for welfare, health, special education and criminal justice programs. Shasta County intends to utilize this "ladder of success" philosophy to implement its Housing Element. Realistic programs that offer incentives and expedite projects that meet this philosophy, and can be implemented by practical actions, accompany the philosophy.

To implement the "ladder of success" philosophy a "ladder of independence" needs to be established within the housing market. This will be established by targeting resources to provide home ownership to those most likely to be able to purchase a home and continue to make mortgage payments with or without government programs. This does not mean that other income levels are ignored, but does require concentration of resources which will reduce the level of participation elsewhere.

After moderate income groups are targeted for home ownership programs, spin off benefits will accrue to low and very low income groups because more rental housing will be made available and rents should stabilize or be lowered. Availability, quality, and cost benefits thus occur. This creates the "ladder of independence".

Successful implementation will require targeting not only income groups, but areas that can and should have increased densities to lower costs and provide more opportunities. Every targeted area will need conditions to insure that the purpose is attained. This will be accomplished by establishing zoning that allows flexibility and at the same time establishes specific needed criteria. Specific development standards will be adopted at the time the property is zoned for the development or the housing policy will be established with the zoning and standards set later with a use permit.

Education programs will be started with the private sector in year one and the necessary zoning tools created. At the same time the role of the Private Industry

Council should be expanded to identify education and training needs to qualify targeted groups for employment and to review and comment on applications seeking to utilize the "ladder of independence".

In year two related zoning tools should be proposed, if local budget and economic conditions are favorable. Training and education programs will be started and specific industry needs targeted (which parallel the focus contained in the Economic Development Element). Year three could see construction started and, if successful, units occupied. This will leave two years for monitoring before the next Housing Element update.

Projects that participate in the success of the program should be considered for waivers or reduced fees, in addition to having their projects expedited once standards are adopted by the County. Any funds accrued for this program will be earmarked in an Enterprise Fund to be administered by the Shasta County Housing Authority. The Shasta Housing Development Corporation could expand to participate in this program or, if needed, another private non-profit corporation might be established.

In addition to innovating a "ladder of success" program, the existing affordable housing stock is a valuable resource that should be conserved and, where possible, improved to meet minimum habitability standards. In addition, the availability of housing is of vital importance, and early attainment of decent housing and a suitable living environment for persons in Shasta County is a priority.

The provision of housing requires the cooperative participation of government and the private sector to expand housing opportunities and accommodate the housing needs of all economic levels, especially low and moderate income households. Shasta County's Goals, Policies, and Programs provide for public/private cooperation and partnerships, government provided incentives and funding where possible, and private sector implementation to provided a variety of housing including conventional and manufactured housing. Various types of housing and densities are encouraged and rehabilitation of existing housing is accommodated.

Program Group H-a emphasizes the following:

1. Private sector implementation and innovation to replace government financing.

2. Provide more incentives to private sector to provide for regional housing needs.

3. Provide increased densities along transportation corridors and where services and infrastructure exist, consistent with community plans.

4. Encourage a mixture of conventional and manufactured housing to meet low income needs.

5. Target moderate income group for home ownership and very low and low income groups for rental and rehabilitation programs.

6. Provide incentives for development that create a jobs/housing balance.

A. Identified Need and Construction Objectives

Overall housing objectives by income group and construction needs are outlined in Table 6-4 in Chapter 6.0. Annual programmatic targets are shown in Table 6-5.

B. Local Limitations

Based on the assumption affecting housing construction targets found in Chapter 6.0, the following are potentially limitations affecting implementation of this program group:

1. Budget constraints.

2. Diminishing grant opportunities.

3. Limited diversity of economy.

4. High unemployment rate.

C. Specific Programs

Government Action

Program 1. Identify new areas for mobile home parks, manufactured housing subdivisions, and manufactured housing condominiums.

Description: Manufactured housing accounts for over 29% of the County's 1992 housing stock, or approximately 9,200 units. Current zoning regulations allow fixed foundation manufacture homes in all residential zone districts and non-foundation mobile homes on an estimated 51,550 acres, with an estimated build-out of 7,485 mobile home units. This program would supplement the County's existing programs for accommodation of manufactured housing by potentially encouraging additional mobile home parks, manufactured housing subdivisions and manufactured housing condominiums in areas where higher densities may be attained with provision of community water and sewer and other urban and suburban development services.

Responsibility: Department of Resource Management, Planning Division /Board of Supervisors

Timing: 1993-1995

Funding: General fund

Program 2. Continue to provide for secondary residential units.

Description: The County's existing zoning ordinance allows several kinds of secondary residential units. First, second units are allowed with a use permit where General Plan, zoning densities and development standards can be met on an existing parcel. Second, the County currently regulates and permits senior citizen residences, family care residences and temporary guest houses as second units.

Responsibility: Planning Division

Timing: Continue existing program

Funding: Application fees

Program 3. Identify areas near major employment centers and zone land for a mixture of housing.

Description: This program will provide areas where employees may live in proximity to their jobs and, therefore, reduce travel costs. It will require cooperation with the City of Redding in order to maximize the benefits of this program.

Responsibility: Planning Division/Board of Supervisors

Timing: 1993/1994

Funding: General fund and planning fees

Program 4. Utilize housing codes consistent with acceptable practices for older homes being remodeled for low and moderate income housing.

Description: Some jurisdictions require current code compliance for all remodels which discourages remodelling of older homes. Acceptable practice remodeling makes older home remodelling possible and helps maintain the housing stock. However, basic health and safety concerns are not to be compromised. Any building code changes are to be approved by the Board of Supervisors.

Responsibility: Department of Resource Management, Building Division

Timing: Continuous

Funding: Building permit fees

Assistance, Grants and Financing

Program 5. Apply for the Department of Housing and Urban Development (HUD), Community Development Block Grants (CDBG) and other appropriate State and Federal grants consistent with available resources.

Description: The CDBG and other grant programs provide funding to provide for adequate housing, a suitable living environment, and expanded economic opportunities for persons of low and moderate income. The County will investigate sources such as the HOME program and the Farmers Home Administration in addition to the CDBG program.

Responsibility: Housing Authority/Board of Supervisors

Timing: Yearly

Funding: Federal housing administrative grants

Program 6. Apply for appropriate CDBG technical assistance grants.

Description: CDBG technical assistance grants are designed to provide technical support moneys, primarily to small cities and counties, to produce supporting data for a CDBG application. This allows communities that cannot afford to fund surveys the opportunity to obtain information needed to quality for CDBG grants.

Responsibility: Housing Authority/Board of Supervisors

Timing: Continuous

Funding: Federal housing administrative grants

Program 7. Consider adopting a policy to expand, rehabilitate, and conserve housing in Shasta County and to provide a variety of types of housing utilizing specific identified programs including, but not limited to:

a. Community Development Block Grants

b. Community Development Block Grants: Technical Assistance Grants

c. U.S. Department of Housing and Urban Development Section 8 rental assistance and rehabilitation programs

d. California Self-Help Housing Program

e. Mortgage Credit Certificates

f. Shasta County Housing Authority Minor Home Repair CDBG Revolving Funds

g. Shasta County Housing Authority Mobile Home Repair CDBG Revolving Funds

Description: These grant programs provide for the core of the County's subsidized housing effort. A Board of Supervisors resolution will show the County's intent to support utilization of those programs in meeting its housing needs.

Responsibility: Housing Authority/Board of Supervisors

Timing: Continuous

Funding: Federal housing administrative grants

Program 8. Participate in the identification of new target areas for the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) programs that could benefit Shasta County.

Description: Both corporations are congressionally chartered, private lenders who purchase locally originated loans in multibillion-dollar amounts including a portion of loans for low income buyers.

Responsibility: Housing Authority/Board of Supervisors

Timing: starting in 1993

Funding: Federal housing administrative grants

Incentives and Bonuses

Program 9. Provide a density bonus program for developments that mix conventional and manufactured home development in order to provide affordable housing to low and moderate income persons.

Program 10. Consider adoption of a flexible planned development zone that provides a density bonus or relaxes development standards to provide low and moderate income housing without compromising health or safety.

Description: Programs 9 and 10 will require intra-agency review and cooperation in developing alternative development standards which lead to opportunities to reduce development costs. This program effort will also require the participation of the development and building industry in reviewing alternative development standards which have positive effects on housing affordability. Model or prototype projects may assist in this effort. Development of these incentive programs should also correlate to any program efforts to encourage more favorable job-housing balances and to increased density along and at the intersection of major transit corridors in existing urban areas. In implementing this program, the County will not provide bonus densities for moderate income housing pursuant Government Code Sections 65913.4, 65915 and 65917.

Responsibility: Resource Management Department in conjunction with the Housing Authority and Department of Public Works/Board of Supervisors

Timing: Beginning in 1993

Funding: General fund and grants and in-kind contributions, as available.

Program 11. Identify areas along urban and town center transportation corridors for increased densities and provide incentives and density bonuses for development projects that locate in these areas and provide affordable housing.

Description: This program should be closely correlated with development of Programs 9 and 10, above. As well as opportunities for increasing the stock of affordable housing, success of this program can lead to air quality, transportation/transit and energy use benefits and mitigation, particularly when coupled with increased mix-use planning in urban areas. City of Redding planning cooperation is essential in implementing this program.

Responsibility: Resource Management Department in conjunction with Housing Authority and Department of Public Works/Board of Supervisors

Timing: Beginning in 1993

Funding: General fund and grants and in-kind contributions, as available.

Program 12. Establish guidelines that reward housing development proposed in areas where existing services can accommodate the density.

Description: Locating housing in areas with existing services reduces the impact on local service providers, limits speculation on land prices, and provides housing in areas where there is more of a likelihood that low and moderate income persons can locate.

Responsibility: Planning Division/Board of Supervisors

Timing: Beginning in 1993

Funding: General Fund

Program 13. Consider a density bonus for housing projects that are designed to provide for alternate modes of travel, including non-motorized vehicles and walking.

Description: Locating housing in areas planned to accommodate a mix of housing and related service and job opportunities for a more transit and pedestrian living environment has a number of potential benefits to housing variety and cost.

Responsibility: Planning Division/ Board of Supervisors

Timing: beginning in 1993

Funding: General Fund

Program 14. Establish a density bonus when an employer is proposing to provide financing for low and moderate income employee housing in a housing project sponsored by the employer and located close to the place of employment.

Description: Employer assisted housing close to the place of employment contributes to jobs housing balance, reduces transportation costs, reduces housing costs and provides more variety of housing.

Responsibility: Planning Division/Board of Supervisors

Timing: beginning in 1994

Funding: General Fund

Public/Private Cooperation

Program 15. The County will cooperate with private non-profit development corporation(s) to apply for appropriate federal and state grants to establish limited equity single family and multi-family developments, which utilize conventional and manufactured housing, for low and moderate income groups.

Program 16. Support limited equity multi-family conventional and manufactured housing projects with private non-profit development corporations.

Description: Limited equity housing provides home ownership to persons that usually could not afford to purchase a home. By maintaining the limited equity status the unit is available to future low income persons. Programs 15 and 16 address support and funding for non-profit development corporations to provide conventional and manufactured housing opportunities.

Responsibility: Housing Authority

Timing: Continuous

Funding: Federal and state housing administrative grants

Program 17. The County will encourage local agencies and businesses to sponsor housing booths to be located in one area at fairs and special events. Information on contracting and realtor services, volunteer services, financing availability and qualification criteria, and available energy saving devices could be distributed.

Description: Public/private cooperation is encouraged by this program that attempts to provide information and educate the public regarding housing services, financing and energy conservation.

Responsibility: Housing Authority in conjunction with private sector

Timing: Continuous

Funding: Other agency funds, private sector

Program 18. The County will encourage the private sector to provide first time homebuyer seminars. The Board of Realtors is usually most helpful in identifying when and where such seminars are held. Realtors, lenders, title company personnel, accountants, and attorney's explain how to buy a house and answer questions.

Description: This program educates prospective first time homebuyers and may encourage home ownership. It will help many plan to purchase their first home, even though the purchase may be in the future.

Responsibility: Housing Authority in conjunction with private sector

Timing: Continuous

Funding: Private sector

II. ADEQUATE SITES

POLICY GROUP H-b: Provide Adequate Sites to:

A. Government Action

1. Maintain an adequate supply of residential land in appropriate land use designations and zoning categories to accommodate projected household growth and to maintain normal residential vacancy rates.

2. Explore the feasibility of acquiring surplus government lands for the development of affordable housing.

3. Promote infill residential development where adequate public facilities and services are already in place.

4. Continue to provide for apartment units and second single-family units where services are available.

5. Continue to designate land for mobile homes in appropriate areas and promote manufactured home condominiums by establishing appropriate development standards and permitting procedures. (These standards should be similar to those contained in the Mobile Home Parks Act, Title 25 of the California Code of Regulations).

6. Accommodate urban densities, consistent with community plans, in those areas where public and private services and facilities are adequate and where surrounding land uses will not be adversely affected.

7. Encourage future housing in areas where public or private services are adequate when those services have been provided, or, where plans have been developed for phased implementation including road systems, schools, water, fire and law enforcement protection, and sewage disposal.

8. Continue to approve individual septic systems on lots where conditions will safely allow such wastewater treatment.

B. Intergovernmental Cooperation

9. Coordinate with the Cities of Anderson and Redding to ensure that an inventory of lands sufficient to accommodate the housing and population growth projected for the planning period is available.

10. Work with the school districts to ensure the availability of adequate school facilities to meet the needs of projected growth of the number of households.

C. Assistance, Grants, and Financing

11. Seek State and Federal assistance for water and sewer facilities to provide for construction of affordable housing.

12. Encourage the establishment of community facility improvement districts to finance needed public works for new development and existing residents in planned growth areas.

13. Ensure that new residential development pays its fair share in financing public facilities and services.

PROGRAM GROUP H-b: ADEQUATE SITES:

Housing programs must identify adequate sites which will be made available through appropriate zoning and development standards and with public services and facilities needed to facilitate and encourage the development of a variety of types of housing for all income levels, including rental housing, factory-built housing, mobile homes and emergency shelters and transitional housing in order to meet Shasta County's housing goals. (Government Code Section 65583(c)(1)). Shasta County's sites are adequate if they provide sufficient holding capacity at appropriate densities and development standards to permit development of a range of housing types and prices to accommodate projected construction need (as defined by the regional share) for all income levels.

The test for adequacy requires a two part analysis:

1. Can the development capacity of suitable land, which is or will be served by infrastructure, realistically accommodate over the next five years Shasta County's total new construction need?

2. Are these currently available sites appropriately zoned for a variety of housing types and densities to facilitate the development of housing to meet Shasta County's projected need by income category?

To increase the residential development capacity Shasta County will utilize the following approaches:

1. Increase existing urban and suburban residential densities in key areas to promote a balance of job and housing opportunities.

2. Designate minimum and average densities of development as well as maximum densities, to assure that the existing, available land is not underutilized.

3. Create a surplus of land for residential development during the next five years equivalent to at least 20% more than the County's share of the regional housing need. This will compensate for urban land left vacant due to ownership and development constraints (about 10%), and create a real surplus (10%). A sufficient supply of land beyond the time frame of the element will also help prevent land shortages from inflating land costs. This approach is consistent with Policy CO-c in the Community Development Element.

A. Identified Need and Construction Objectives

Based on Chapter 6.0's fair share evaluation, it is estimated that the County will need adequate sites to construct 2,431 housing units during the life of the Housing Action Plan. Tables 6-4 and 6-5 in Chapter 6.0 provide estimated construction needs for each basic income group, including annual programmatic targets.

B. Local Limitations

Based on planning assumptions found in Chapter 6.0, the following local limitations could affect this program group:

1. Lack of public service infrastructure.

2. Budget constraints.

C. Specific Programs

Government Action

Program 19. Identify and acquire surplus government lands for development of affordable housing by the private sector utilizing a mixture of conventional, manufactured, and mobile home housing to create affordable housing.

Description: According to state law, all public agencies intending to dispose of surplus land must first send a written offer to any local agencies within whose jurisdiction the land lies to sell or lease the land for the following purposes: recreation or open-space uses; enterprise zone uses; schools; or development of low and moderate income housing. In the event that the agency disposing of the land receives more than one offer, it must give first priority to the entity which agrees to use the site for housing for low or moderate income housing, unless the land is already being used for parks or recreation uses, in which case the entity offering to continue these uses will receive priority (Government Code Section 54220 et seq.).

By acquiring surplus government land the cost of housing can be reduced. Land costs are a significant portion of the total cost of housing and may be reduced or eliminated through this program.

Responsibility: Planning Division and Housing Authority

Timing: Continuous

Funding: Minor general fund impact, federal and state housing administrative grants

Program 20. Prepare and maintain a current inventory of lands zoned for two-family (R-2) and multiple family (R-3) uses, including the vacancy status of such lands.

Description: Adequate sites for manufactured housing, mobile homes and various kinds of second units, as well as for R-2 and R-3 zoned lands, all contribute to the County's obligation in meeting its housing affordability needs. Special focus on the R-2 and R-3 zoning inventory is needed in order to begin implementing other programs, including Program 21, below.

Responsibility: Planning Division

Timing: Continuous

Funding: Minor general fund impact

Program 21. Provide an annual rezoning program which increases land available for medium and high residential densities for purposes of encouraging affordable housing for the very low and low income. This program effort shall be focused in existing town centers and within serviceable unincorporated areas within City spheres of influences.

Description: Government Code Section 65583(c)(1), among its requirements, provides that there be a program which assures sufficient sites with zoning to accommodate two-family and multifamily housing to meet the Shasta County housing goals. If these sites are not identified, the program must provide sites for multifamily residential use by right, subject only to building permit and meeting development standards. Based on Table 6-4, 1,138 very low and low income housing units are needed during the five year Housing Action Plan. The County also needs to accommodate 1,293 units for moderate and above moderate income groups.

The total of 2,431 housing units translates to 486 total units per year (228 units annually for very low and low income persons and 259 units for moderate and above moderate income persons.) To provide housing for very low and low income groups provisions for multifamily housing is required.

The unincorporated area had 57% of the single family housing in the County and 9% of the multifamily (2 or more units) housing according to the 1990 Census. To maintain this same ratio the County would need to provide 1,386 single family units and 219 multifamily units annually. However, it is impossible to meet the very low and low income requirements under this existing ratio with single family units because multifamily rental housing is required to make such housing cost effective for very low and low income residents.

The Shasta County zoning ordinance presently contains a total of 178.7 acres in the R-3 (Multiple-family residential) zone district. All of this acreage is located in community and urban centers with available water and sewer service. The R-3

zone is distributed in the following communities: Cottonwood, 55.75 acres; Central Valley, 87.84 acres; Burney, 13.15 acres; and Pine Grove/North Redding, 21.94 acres. Based on an average of 12 units per acre density allowed in this zone, the County's 178.7 acres of R-3 zoning could allow as much as 2,144 units, if fully developed.

Shasta County needs to meet most of its very low and low income housing unit requirements with multifamily housing. To provide for 228 units per year the County would need to identify 16.3 acres annually at an average density of 12 units/acre. A total of 81.4 acres of R-2 and R-3 should, therefore, be identified in the General Plan just to meet the very low and low income requirements. In addition, at least 20% of the moderate and above moderate income requirements should be provided for in the R-2 and R-3 areas. To provide for 52 units annually the County needs to identify a minimum of 4.3 acres per year at an average density of 12 units/acre. A total of 21.5 acres of R-2 and R-3 should be identified in the General Plan just to meet the moderate and above moderate income requirements. The total of 103 acres of new R-2 and R-3 in the General Plan would provide enough multifamily designated area to meet the requirements of Government Code Section 65583(c)(1).

Responsibility: Planning Division with assistance from Housing Authority/Board of Supervisors

Timing: Annually

Funding: General fund

Intergovernmental Cooperation

Program 22. Work with School Districts to provide joint use facilities with new housing developments and establish consistent criteria to be used to evaluate projects.

Description: Developers need to identify all housing costs before financing is made available. Consistent criteria from school districts makes it easier to identify costs and justify mitigation fees. Joint use of facilities is not only a cost saving factor, but provides economies of scale to provide more programs.

Responsibility: Planning Division

Timing: Beginning in 1993

Funding: General fund

III. CONSTRAINTS

POLICY GROUP H-c: REMOVE HOUSING DEVELOPMENT CONSTRAINTS TO:

A. Government Action

1. Promote the expeditious processing and approval of residential projects that conform to General Plan policies and regulatory requirements.

2. Ensure that policies, regulations, and procedures do not add unnecessarily to the cost of producing housing while assuring the attainment of other County objectives.

3. Ensure and facilitate efficient processing of housing development without compromising other General Plan policies or standards.

4. Develop and implement a fast track permitting process for very low and low income housing projects.

5. Facilitate efficiency of regulatory processing by providing coherent and up-to-date regulations.

6. Continue to monitor and modify, as appropriate, the regulatory system to ensure its efficiency.

7. Designate a department to be the central permit agency for all residential development.

8. Continue to examine various departments and combine or reorganize functions where possible for the central permit processing agency.

9. Periodically update the zoning ordinance, as necessary, to ensure its consistency with the General Plan.

10. Revise existing codes and standards to enable the development of a choice of residential opportunities providing a variety of housing types, designs, and costs at appropriate locations.

11. Encourage those changes in housing standards and building codes that solve long range problems, minimize the cost of housing, and maximize the longevity of housing.

12. Accommodate manufactured housing and mobile homes in the appropriate County residential zones by adopting design standards assuring its compatibility with community characteristics.

13. Continue to allow the installation of mobile homes and manufactured housing on permanent foundations in accordance with residential design and safety standards.

14. Continue to allow the placement of mobile homes on one-family residential lots in all zones provided such mobile homes are placed on permanent foundations and meet other applicable County design and safety criteria.

15. Establish regulations which govern the conversion of apartments and mobile home parks to condominiums when requested.

16. Monitor the conversion of rental housing to condominiums and, if necessary, adopt an ordinance regulating future conversions.

17. Promote measures to preserve architecturally and historically significant residential structures, particularly when developing community plans.

18. Promote the protection of historical housing and existing residential areas by prohibiting commercial and industrial intrusion and conflict.

19. Require abatement of unsafe structures, giving property owners opportunities to correct deficiencies.

20. Develop and implement control mechanisms to ensure that any jobs/housing development results in providing housing to its intended user.

21. Encourage employers to employ local residents in local jobs.

22. Require, in accordance with State law, that the Housing Element be revised every five years, with the next revision to be completed within five years from the effective date of this element. In addition, progress in implementing housing element programs will be monitored and included in the annual report on the General Plan.

B. Intergovernmental Cooperation

23. Work with the City of Redding and City of Anderson to insure:

    a. The orderly development of unincorporated lands, including resource lands and lands with high fire hazard adjacent to urban incorporated areas.

    b. The consistency of land use policies and development standards in areas within City spheres of influence.

    c. The promotion of infill within City spheres of influence.

24. Investigate the expansion of existing non-profit housing activities with the Cities of Redding and Anderson to develop cooperative housing, obtain below market-rate financing and take advantage of tax incentives for the development of low and moderate income housing and community facilities.

C. Incentives and Bonuses

25. Ensure that developments in Urban or Suburban designated areas providing at least 25% of the saleable units for low and moderate income housing are awarded up to a 25% density bonus provided, that when combined with other density bonuses, the overall density bonus does not exceed 25% or tax the capacity of public sewer and water systems.

D. Public/Private Cooperation

26. Expand the relationship between the Housing Authority and non-profit housing organizations for use of pass-through Federal assistance for housing including:

    a. Community Service Block Grants;

    b. Housing Authority Administrative Reserves, and

    c. Department of Housing and Urban Development/Federal Housing Administration Home Program: Home Investment Partnerships.

27. Provide technical assistance, upon request, to developers wishing to use the Farmers' Home Administration or California Housing Finance Agency programs to finance housing in rural communities for low and moderate income families.

28. Provide information on file to the public and developers regarding approved residential projects and vacant land supply.

E. Information

29. Maintain information on State and Federal programs that developers can use to finance and operate housing developments that will include units for low and moderate income households.

30. Provide population, housing cost, household income, employment, or other information on file which may be of use in completing an application for government assistance.

PROGRAM GROUP H-c: HOUSING DEVELOPMENT CONSTRAINTS:

Government Code Section 65583 subsections (a) and (b) require housing elements to contain an analysis of potential and actual governmental and nongovernmental constraints upon the maintenance, improvement, or development of housing for all income levels.

Although local ordinances are enacted to protect and further the general welfare, it may be useful to periodically reexamine ordinances and policies to determine whether, under current conditions, they are accomplishing their intended purpose. Such an examination may reveal that in practice the ordinance or policy may contain excessive performance standards and is so restrictive as to operate as an unwarranted constraint.

Analyzing specific local housing cost components, including the cost of land, cost of construction, and availability of financing will assist in developing housing programs that are more responsive to land conditions.

Program Group H-c emphasizes intergovernmental and private/public cooperation as one key to reducing development constraints on housing.

A. Identified Need and Construction Objectives

There is a qualitative need to reduce government constraints that contribute unnecessarily to the cost of housing.

B. Local Limitations

Serious and chronic budget limitations may act to hamper efforts to remove many identified constraints on developing and meeting housing needs.

C. Specific Programs

Government Action

Program 23. Adopt a Department of Resource Management policy which provides specific procedures to fast track very low and low income housing developments.

Description: Time is money for all projects, but this is especially true for very low and low income housing developments because there is little profit to absorb the lost time costs. This program will help keep costs down for these projects.

The County has conducted several studies about how to improve its planning and permitting operations. Many of these recommendations are in the process of being implemented, including improved coordination of interdepartmental and interagency reviews and development of permit tracking systems. This program envisions utilizing these systems as they develop and providing housing projects which meet general plan, zoning and development standard requirements priority review.

Responsibility: Planning Division with assistance from Housing Authority

Timing: 1993

Funding: Limited general fund/building administrative fees

Program 24. Prepare and consider an ordinance for the conversion of apartments and mobile home parks to condominiums.

Description: This program will be implemented when the County's subdivision map ordinance is revised.

Responsibility: Planning Division/Board of Supervisors

Timing: 1994

Funding: General fund/application administrative fees

Program 25. Consider adopting a policy that permits use of alternate building techniques to conserve historic and architecturally significant structures used to provide low and moderate income housing.

Description: This program is similar to Program 4 which addresses older houses which may not be historic. Implementation of Program 27 will provide housing and preserve historic and architecturally significant structures.

Responsibility: Building Division/Board of Supervisors

Timing: 1994

Funding: Building administrative fees

Intergovernmental Cooperation

Program 26. Consider adopting a position and invitation to the Cities of Anderson and Redding to form a single county Council of Governments.

Description: Shasta County and the Cities of Redding and Anderson should investigate and, if at all possible, form a single County Council of Governments (COG). If Shasta County and the Cities of Redding and Anderson were to form a single County COG, it would be possible to institute regional solutions for housing, infrastructure and employment and distribute the HCD regional housing needs allocations locally. Combined efforts would achieve economies of scale and eliminate duplicated efforts. To some degree, this is already happening without credit being given to the cooperating agencies. The County's four homeless shelters are all in the City of Redding, the Shasta County Housing Authority provides direct support to and implementation of the City of Anderson's Housing Element, and Redding provides sewer service to areas in unincorporated Shasta County.

Responsibility: Board of Supervisors

Timing: 1993

Funding: None needed

Program 27. Establish an area at the Public Library and assign a person to work with the Library staff to supply information on State and Federal programs to finance and operate housing developments for low and moderate income households. Provide request forms that can be folded and mailed to obtain population, housing cost, household income, employment, and other available information.

Description: Information, data, and education can be obtained and distributed through implementation of this program.

Responsibility: Housing Authority

Timing: Beginning in 1993

Funding: Housing Authority administrative grants

Public/Private Cooperation

Program 28. Consider adopting a policy to expand the relationship between the Housing authority and non-profit housing organizations for use of pass-through Federal Assistance for housing including:

a. Community Service Block Grants
b. Housing Authority Administrative Reserves
c. Department of Housing and Urban Development Home Investment Partnerships Grants.

Description: These programs benefit low income persons and are only possible by public/private partnerships and cooperation. Commitment to this program will allow these needed programs to continue.

Responsibility: Housing Authority/Board of Supervisors

Timing: 1993

Funding: Housing Authority administrative grants

IV. SPECIAL NEEDS

POLICY GROUP H-d: PROVIDE FOR SPECIAL NEEDS TO:

A. Government Action

1. Give attention in housing programs to the needs of special groups, including the physically and mentally disabled, large families, the elderly, and families and individuals with lower incomes.

2. Continue to provide opportunities for second single-family residences and apartment units in appropriate areas.

3. Continue to provide opportunities for senior citizen housing and for family care mobile homes that supply temporary housing for the elderly and those in medical need.

B. Intergovernmental Cooperation

4. Continue to work with surrounding jurisdictions to address the needs of the homeless on a regional basis.

5. Encourage the high school and community college to establish a program whereby students gain practical home construction and repair techniques by repairing homes of persons with special needs.

C. Public/Private Cooperation

6. Cooperate with and possibly subsidize community-based organizations which provide services or information regarding the availability of services to the homeless.

PROGRAM GROUP H-d: SPECIAL NEEDS:

Special needs are those associated with relatively unusual occupational or demographic groups, such as farm workers or large families, or those which call for unusual program responses, such as preservation or residential hotels or the development of four-bedroom apartments.

Housing element law requires that Shasta County make adequate provision for the existing and projected needs of al economic segments, which includes those with special needs. Special needs groups have been identified and, to the degree possible, responsive programs are provided. Where their needs are not fully known programs to secure funding to further identify the groups location and needs have been developed.

A. Identified Need and Construction Objectives

Overall housing objectives by income groups, including for very low, low and moderate incomes, are outlined in Table 6-4 in Chapter 6.0. Previous Housing Element chapters describe the needs of the handicapped, large families, homeless and others needing temporary and emergency shelter.

A principal emphasis of this Program Group is to seek State technical assistance grants to identify extent and location of special needs persons and identify ways and means to assist such persons and groups.

B. Local Limitations

Local government budget limitation may act to limit effectiveness in implementing this Program Group.

C. Specific Programs

Government Action

Program 29. Enforce handicapped adaptability requirements of Title 24 of the California Administrative Code.

Description: This required program assures needs of persons with physical limitations are met.

Responsibility: Building Division

Timing: Continuous

Funding: Building permit fees

Program 30. Consider adoption of a requirement for new apartment houses of five or more units to be adaptable for handicapped access by amending the appropriate County Code.

Description: Implementation of Program 34 will provide greater access to housing for persons with physical limitations.

Responsibility: Building Division/Board of Supervisors

Timing: 1993

Funding: Building permit administrative fees

Program 31. Amend the subdivision and zoning ordinances to require a certain percentage of housing within a subdivision to be designed for expansion as a family grows.

Description: This program enables growing families to purchase starter homes and be assured that the housing unit can be easily and cost effectively expanded in the future.

Responsibility: Planning Division/Board of Supervisors

Timing: After 1994

Funding: General fund

Intergovernmental Cooperation

Program 32. Work with the City of Redding and non-profit agencies to establish a permanent year round emergency shelter capable of providing shelter to a minimum of 100 individuals a night.

Description: Emergency shelter needs are an areawide concern which does not recognize jurisdictional boundaries. Consolidated efforts by the County and City will provide greater areawide benefit to those needing emergency shelter.

Responsibility: Housing Authority

Timing: Continuous

Funding: Both State and Federal grants are provided to local government to assist in the provision and operation of emergency housing facilities.

Program 33. Adopt a Resolution to encourage the High Schools and Community College to establish a program whereby students gain practical home construction and repair techniques by repairing homes of persons with special needs.

Description: Everyone benefits from this cost saving technique that provides a service to special needs persons, preserves the housing stock and gives experience in the construction trades to school participants.

Responsibility: Board of Supervisors

Timing: 1994

Funding: General fund

Program 34. Sponsor a conference on affordable housing and needs of the homeless with the Cities of Redding and Anderson.

Description: Participation in this program demonstrates a real desire to address housing needs through intergovernmental cooperation.

Responsibility: Housing Authority with assistance from private sector

Timing: 1993 and 1995

Funding: Housing Authority administrative grants

Assistance, Grants, and Financing

Program 35. Support community based organizations.

Description: Shasta County will continue to provide support for the homeless and home sharing programs listed on Page 287 within its resources and to the degree it is practical relative to other housing and government financing needs. If any of these programs are eliminated, findings will be made to provide the logic and financial nexus for such a decision.

The Shasta County Social Services Department (SCSS) also provides temporary homeless money (up to 16 days) for housing for any homeless person that has not received benefits within the last 24 months, usually three to four days at a time. If the person finds temporary housing, motel or campground, and reports back with a receipt, SCSS will pay the deposit and last months rent.

Those who do not qualify are referred to shelters. Families that qualify for long term assistance under the AFDC program, usually receive funds in 7-10 days. Homeless children are placed in foster homes.

Shelters and transitional facilities are provided at the following locations:

1. National Guard Armory winter shelter, 3025 South Street, Redding. Operated for five months each winter, this facility has a capacity of 150. Highest use to date has been 100. Administering organization is Salvation Army, 2691 Larkspur Lane, Redding, 222-2207.

2. Shasta County Women's Refuge, location of shelter confidential. Administration office: 2280 Benton Dr., Suite A, Redding, 244-0117.

3. Good News Rescue Mission, 3100 South Market Street, Redding. This 28-bed facility provides a seven-day stay to homeless individuals. Administration is at facility, 241-5754.

4. Three transitional housing facilities are jointly operated by the Shasta Housing Development Cooperation, 1422 Oregon Street, Redding, 243-0172 and People of Progress, 1242 Center Street, Redding (243-3811). They are:

- A 16-unit (64 beds) facility at 3510 South Market Street, Redding.
- A four-unit (16 beds) building at 705 Parkview Avenue, Redding.
- A six-unit (24 beds) building at 655 Parkview Avenue, Redding.

Program 36. Apply for a State technical assistance grant to identify the extent and location of housing needs for large families, elderly persons, farm workers, homeless persons, and female heads of households and identify ways and means to reduce overcrowding and overpayment.

Description: Shasta County needs more basic data than is available through the Census for these groups. Obtaining a technical assistance grant would enable the County to better identify needs of these groups and housing implementation strategies and programs.

Responsibility: Housing Authority/Board of Supervisors

Timing: 1992, 1993

Funding: Housing Authority administrative grants

Program 37. Apply for Farmers Home Administration (FmHA) home ownership loans for low and moderate income families.

Description: Low and moderate income families qualify for FmHA loans and generally need only the assistance of an experienced person to apply and qualify. This program would provide the necessary service.

Responsibility: Housing Authority/Board of Supervisors

Timing: Continuous

Funding: Housing Authority administrative grants

Public/Private Cooperation

Program 38. Continue to cooperate with the Shasta Housing Development Corporation to implement the programs providing emergency housing including, but not limited to:

a. McKinney Transitional Housing Program;
b. State Emergency Shelter Program (ESP); and
c. Federal Emergency Shelter Grant (FESG).

Description: Grants from these programs provide funding for emergency and transitional housing. Continued cooperation by the county with the Shasta Development Corporation is needed to obtain future grants.

Responsibility: Housing Authority

Timing: Continuous

Funding: Housing Authority administrative grants

V. ENERGY CONSERVATION

POLICY GROUP H-e: PROMOTE ENERGY CONSERVATION TO:

A. Government Action

1. Encourage energy conservation measures in new and existing units so that utility bills do not increase as a percentage of household income.

2. Require that new units constructed in Shasta County comply with State energy conservation (or mobile home construction) standards.

3. Enforce Title 24 of the California Administrative Code which requires energy conservation devices or features to be incorporated into all new housing development.

4. Require the use of energy conservation features in the design of all new residential structures and promote incorporation of energy conservation and weatherization features in existing homes.

5. Require that the design of all new residential developments take advantage of solar access as required by the Subdivision Map Act.

B. Assistance, Grants, and Financing

6. Assist lower income residents (households earning less than 80% of County household median income) each year to rehabilitate, repair, and weatherize their substandard units through Community Development Block Grant and Farmers' Home Administration Funds.

7. Continue to include weatherization as an eligible community development block grant activity.

8. Continue to include weatherization in the minor Self Help Home Repair and Weatherization program.

PROGRAM GROUP H-e: ENERGY CONSERVATION:

An analysis of opportunities for energy conservation with respect to residential development is required by Government Code Section 65583(a)(7). The purpose of this analysis is to ensure that Shasta County has considered how energy

conservation might be achieved in residential development and how energy conservation requirements may contribute to the affordability of housing units.

The programs that are provided for Shasta County have been successful in reducing energy costs or consumption in other areas. These programs will be just as successful in Shasta County.

A. Identified Need and Construction Objectives

Qualitative need to reduce the energy use and cost in housing is supported by the County's Energy Element. A part of this program's emphasis is to improve government actions by taking advantage of energy saving land development and construction techniques.

B. Local Limitations

Local government budget constraints could adversely affect some of these programs. On the other hand, implementation of certain energy conservation features may bring long term cost savings to owning or renting a residential unit while increasing the value of the unit, itself.

C. Specific Programs

Government Action

Program 39. Continue to enforce Title 24 of the California Administrative Code which requires energy conservation devices or features to be incorporated into all new housing development.

Description: This required program provides energy cost savings which can be used for other living purposes.

Responsibility: Building Division

Timing: Continuous

Funding: Building permit fees

Program 40. Amend the zoning ordinance and subdivision ordinance to require new residential developments to take advantage of solar access as required by the Subdivision Map Act.

Description: Solar energy use is cost effective and can only be utilized if access to the Sun is possible. Implementation of this required program provides the opportunity for solar access.

Responsibility: Planning Division/Board of Supervisors

Timing: 1994

Funding: General fund

Program 41. Consider amending the General Plan to require all community plans to have a density infill policy in all urban areas with services and infrastructure as one means to conserve energy.

Description: This cost effective program conserves energy and assures full utilization of existing facilities and services.

Responsibility: Planning Division/Board of Supervisors

Timing: Beginning in 1993

Funding: General fund

Program 42. Consider amending the zoning and subdivision ordinances to require that streets and parking lots be landscaped with trees capable of providing shade to the street and parking surfaces and surrounding buildings.

Description: Sun radiating heat off concrete and asphalt surfaces raises the temperature in the vicinity and requires more use of energy to cool adjacent buildings during warm weather. Trees provide shade and evapotranspiration which helps to reduce radiating heat.

Responsibility: Planning Division/Board of Supervisors

Timing: Beginning in 1993

Funding: General fund

Program 43. Consider amending the zoning and subdivision Ordinances to require energy conservation retrofitting of multi-family units and conversions of apartments and mobile home parks to condominiums.

Description: Cost savings accrue to all persons residing in these housing units and low income persons especially benefit because the amount saved results in a higher percentage benefit. This provides money for other living uses, including basic needs.

Responsibility: Planning and Building Divisions/Board of Supervisors

Funding: Building permits administrative fees

Assistance, Grants, and Financing

Program 44. Apply for a CDBG technical assistance grant and other Federal and State grants to establish an continuing program with a local non-profit or volunteer organization to provide information and assistance in obtaining funding and construction related to energy conservation programs available in Shasta County, including, but not limited to:

a. CDBG funds
b. Farmers Home Administration funds

c. Energy Commission funds
d. Self Help Home Repair Program
e. Heat pump energy savers.

Program 45. Apply for appropriate Federal and State grants for energy conservation, especially to combine with other programs financing low and moderate income housing developments.

Description: Knowing where to obtain funding and how to apply is critical towards obtaining grants and loans. This program would provide the necessary funding to start a needed energy conservation program.

Responsibility: Housing Authority/Board of Supervisors

Timing: Beginning in 1993

Funding: Housing Authority administrative grant funds

Incentives and Bonuses

Program 46. Consider amending the zoning and subdivision ordinances to provide for reductions of street width standards in energy conserving Planned Developments only, especially when low and moderate income housing developments are involved.

Description: This program is related to Program 45, with the same responsibility, timing and funding.

VI. FAIR HOUSING

POLICY GROUP H-f: PROMOTE FAIR HOUSING TO:

A. Government Action

1. Prohibit all forms of discrimination in housing.

2. Make information on the enforcement activities of the State Fair Employment and Housing Commission available to the public.

3. Promote equal access to housing by all of residents regardless of race, color, sex, religion, national origin, age or other arbitrary distinctions.

4. Promote greater access to housing by handicapped residents in two ways. First, enforce handicapped adaptability requirements of Title 24 of the California Administrative code. Second, in addition to the State requirement, encourage builders to provide at least ten percent of new housing units with structural or equipment features which actually meet special handicapped access needs.

5. Require all new apartment houses of five or more units to be adaptable for handicapped access.

6. Assist alleged victims of discrimination in regard to equal housing opportunities. The assistance shall include ensuring that the complaint is referred to the proper State or Federal agency.

PROGRAM GROUP H-f: PROMOTE FAIR HOUSING:

State and federal laws forbid any provider, seller, financier, or broker of Housing to discriminate against potential buyers or tenants based on specified arbitrary classifications. These classifications include race, color, sex, religion, national origin, ancestry, marital status, and (in California) the presence of children . In addition, advertisements may not include any explicit or implied discriminatory or exclusionary features. However, certain individuals may still face illegal discrimination in their search for housing.

Such individuals, therefore need a process by which illegal discrimination can be identified and terminated and by which housing providers can seek advice regarding their legal responsibilities under state and federal laws.

A. Identified Need and Construction Objectives

Discrimination in housing is prohibited by state and federal law. This Program emphasizes providing information on processing and permitting to individuals to protect their rights.

B. Local Limitations

Significant budget cuts at the local government level may limit this program.

C. Specific Programs

Assistance, Grants, and Financing

Program 47. Apply for a CDBG Technical Assistance Grant to establish a prototype agreement with the Shasta County Board of Realtors to provide information and education to all persons involved in housing on fair housing law and practices, including, but not limited to:

a. Provide information on the enforcement activities of the State Fair Employment and Housing Commission available to the public.
b. Promote equal access to housing.
c. Refer alleged victims to the proper State or Federal agency.

Description: Most housing discrimination by owners and managers is a result of not knowing the law. Those who are discriminated against are generally just as unaware of their rights. This program would educate both groups and reduce discriminating practices in Shasta County. Shasta County will obtain free fair housing literature from the State and make such information available at the Planning Division, even if unsuccessful in obtaining a CDBG grant. Fair housing posters and other literature will be distributed to schools, libraries, post offices and local media.

Responsibility: Housing Authority/Board of Supervisors

Timing: 1993

Funding: Housing Authority administrative grants

Public/Private Cooperation

Program 48. Work with the Board of Realtors to sponsor Fair Housing by keeping information at the office and providing training seminars to realtors and rental property owners.

Description: The Board of Realtors is in contact with more people dealing in real estate than any other singular group. Boards of Realtors throughout the state have participated in Fair Housing information programs. Participation in this program by the Shasta county Board of Realtors would provide a great service to County residents.

Responsibility: Housing Authority and private interests

Timing: Beginning in 1992

Funding: Housing Authority administrative grants and private sources

7.3.8 GENERAL PLAN CONSISTENCY

Government Code Section 65300 requires each county or city to adopt a comprehensive, long-term general plan for its physical development. Section 65302 states: "The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals." Section 65302 also enumerates seven elements which every general plan must include: land, circulation, housing, conservation, open-space, noise and safety.

In addition to being geographically comprehensive, a general plan must address each of the mandatory elements. The General Plan Guidelines suggest that a truly comprehensive general plan covers all locally relevant physical, social, and economic planning issues. Physical development concerns include the general locations, appropriate mixtures, timing and extent of land uses and supporting infrastructure.

Section 65860(a) requires zoning to be consistent with the General Plan. It also states that a zoning ordinance is consistent with the General Plan only if the various land uses authorized by the ordinance are compatible with the objectives, policies, general land uses, and programs specified in the Plan. Zoning is required to be consistent with the General Plan "within a reasonable amount of time".

The General Plan Guidelines note that at one time general plans were looked upon as a set of broad policies that had little actual role in development decisions and that consistency requirements have enlarged the role of the general plan in the physical development of cities and counties.

As early as 1979 the Court recognized that the consistency requirement transformed the general plan from just an interesting study to the basic land use charter governing the direction of future land use in the local jurisdiction. The Court stated: "As a result, general plans now embody fundamental land-use decisions that guide the future growth and development of cities and counties." (City of Santa Ana v. City of Garden Grove).

In 1981 the Court found that if the Plan does not reflect substantial compliance with the requirements of state law, the city or county has failed in the "performance of an act which the law specifically enjoins." (Camp v. Board of Supervisors).

In addition, the Court found in 1982 that substantial compliance means actual compliance in respect to the substance essential to every reasonable objective of the Government Code, as distinguished from technical imperfections of form. Whether a general plan substantially complies with the requirements of the Government code is a question of law. (Twain Harte Homeowners Assn. v. County of Tuolumne).

The Court recognized in Guardians of Turlock's Integrity v. Turlock City Council (1983) that the lack of a mandatory element invalidates the general plan if the missing element is directly involved in the project under review. The lack of a mandatory element in this case did not mean it did not exist but that the general plan was deficient in its treatment of the mandatory element.

In 1985 the Court noticed that the general plan has been identified as being atop the hierarchy of local government law regulating land use and has been analogized to a constitution for all future developments. (Concerned Citizens of Calaveras County v. Board of Supervisors.)

Most recently the court compelled the City of Los Angeles to zone property designated "neighborhood and office" in the general plan to allow office buildings. (Warner Ridge Associates v. City of Los Angeles, 1991). The City had rezoned the property "residential suburban" and stated its intent to change the general plan later. The Court stated: "The City has stated an intention to amend the general plan to bring the general plan into consistency with the zoning ordinance recently enacted. Clearly, this is an illegal backwards approach to the important environmental issue of land use."

In enacting Government Code, Article 10.6 (Sections 65580-65589.8), detailing requirements for the mandatory housing element, the Legislature declared the availability of housing is a matter of "vital statewide importance" and "the early attainment of decent housing and a suitable living environment for every California family is a priority of the highest order." To attain the state housing goal, the Legislature found, requires "cooperative participation" between government and the private sector, cooperation among all levels of government , and use of state and local governmental power "to facilitate the improvement and development of housing" for "all economic segments of the community." The Legislature recognized each local government in adopting a housing element must also consider economic, environmental and fiscal factors as well as community goals set forth in the general plan.

The Legislature stated its intent in enacting Article 10.6 was, inter alia, "To assure cities and counties recognize their responsibilities in contributing to the attainment of the state housing goal" and "will prepare and implement housing elements which, along with federal and state programs, will move toward attainment of the state housing goal."

In addition, the Legislature provided: "the housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, and mobile homes, and shall make adequate provision for the existing and projected needs of all economic segments of the community." The Legislature then set out detailed requirements for an "assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs, a statement of the community's goals, quantified objectives, and policies relative to the maintenance, improvement, and development of housing, and a program which sets forth a five-year schedule of actions the city or county is undertaking or intends to undertake to implement the policies and achieve the goals and objectives of the housing element." The Legislature also directed cities and counties to consider the guidelines adopted by the Department of Housing and Community Development and to submit both the proposed as well as the adopted housing element to the Department for review.

In 1985 the Court noted in Buena Vista Gardens Apartments Association v. City of San Diego Planning Department that " While this court may be of the opinion City should adopt Department's recommendations, the Legislature has stated its recommendations are advisory."

Shasta County's 1992 housing element update meets the specific requirements of Government Code Article 10.6 and the intent of the Department of Housing and Community Development guidelines. It also meets the requirement of internal consistency.

The Housing Element goals, policies, objectives, and programs are consistent with and complement the land use and transportation goals, policies, objectives, and programs. Specifically, the land use element provides for more than enough land for future housing needs and quantifies this fact. It goes on to identify that if a deficiency exists it is that adequate services and infrastructure may not be available in the right locations. Both the Housing Element and the General Plan identify the need to expand housing in areas that already have services and infrastructure and to seek ways and means to expand infrastructure in existing communities, consistent with local community plans.

The Housing Element recommends that new high density development be encouraged along existing and future transportation corridors and the General Plan will have a matrix that will enable staff to review projects to assure consistency with all General Plan Elements.

Cooperation between government and the private sector to meet Shasta County's housing needs is encouraged and made part of the programs. Cooperation between governments is also encouraged as one program calls for the County to seek the cooperation of the Cities of Anderson and Redding to form a single County Council Of Governments to help identify and meet the housing needs of Shasta County.

7.3.9 AT-RISK SUBSIDIZED HOUSING

A. INTRODUCTION

Government Code Section 65583 requires that the housing element analyze and program efforts for preserving assisted housing developments that are at risk of conversion to market rate rents. Housing units are defined as "assisted" if the development or rehabilitation of those units was funded in whole or part through federal, state or local programs to provide affordable housing. Affected programs are listed below:

A. Department of Housing and Urban Development programs:

1. Section 8 Lower-income Rental Assistance project based programs

   a. New Construction

   b. Substantial or Moderate Rehabilitation

   c. Property Disposition

   d. Loan Management Set-Aside

2. Section 101 Rent Supplements

3. Section 213 Cooperative Housing Insurance

4. Section 221(d)(3) Below-Market-Interest-Rate Mortgage Insurance Program

5. Section 236 Interest Reduction Payment Program

6. Section 202 Direct Loans for Elderly or Handicapped

7. Community Development Block Grant program.

B. Farmers Home Administration (FmHA) Section 515 Rural Rental Housing Loans

C. State and local multifamily revenue bond programs

D. Redevelopment Programs

E. Local in-lieu fee programs or inclusionary programs

F. Developments which obtained a density bonus and direct government assistance pursuant to Government Code Section 65916.

A housing development or unit becomes "at-risk of conversion" if the use restriction attached to the funding assistance is eligible for removal during the next ten years. This occurs for example when a property owner pays off a government subsidized loan. The

purpose of the at-risk analysis is to identify actions (i.e., programs) the jurisdiction can take to preserve at-risk units, to adequately plan for preventing or minimizing tenant displacement and to preserve the local affordable housing stock. The following components are required as part of the at-risk analysis:

1. Inventory of units at-risk of losing use restrictions

2. Cost analysis of preserving at-risk units versus replacing them

3. Resources for preservation

   a. Nonprofit entities capable of acquiring and managing at-risk projects

   b. Potential preservation financing sources and estimates of available funds

4. Quantified objectives (i.e., the number of at-risk projects and the units to be preserved)

5. Programs (i.e., efforts to preserve units at-risk of losing use restrictions).

The following explains the process Shasta County utilized to identify at-risk units, determine costs to preserve units versus replacement, discover resources for preservation, ascertain quantified objectives and prepare programs to preserve units at-risk of losing use restrictions.

INVENTORY

Applicable public and private agencies were contacted to determine how many at-risk units assisted by the Federal, State, and local governments exist in unincorporated Shasta County.

Information available from the State Department of Housing and Community Development revealed the Burney Villa Apartments as a project shown at-risk during the planning period. There is a pending early buy out application with the Farmers Home Administration for this project.

In a letter from the Farmers Home Administration Redding Office dated December 28, 1992 it was stated: "Subject application is being reviewed in our State Office. It was forwarded to them in August 1992. We do not anticipate any loss of subsidized housing as a result of this request." However, if the owners qualify for early buy out the Farmers Home Administration will provide incentives to keep the project in the program as stated in a letter from FmHA's Redding Office dated May 6, 1992.

Early buy out does not appear likely because the socio-economic conditions and market in Burney do not appear able to support a 44 unit market rate apartment complex. If by some chance early buy out is feasible it is likely the incentives to be offered by the Farmers Home Administration will be taken because the community of Burney has a low per capita income, high unemployment rate, high level of assisted housing, and a small population.

If, by some chance, early buy out was possible and the FmHA's incentives were not enough the Shasta Housing Development Corporation has stated they would be interested in purchasing the units, if financially feasible.

The Shasta County Community Action Agency determined Community Development Block Grant funds were not used in conjunction with other funding for multifamily rental units.

Except as noted above, there are no housing projects in unincorporated Shasta County that are effected by State or local revenue bond programs, redevelopment programs, local in-lieu fee or inclusionary programs, density bonus programs, or direct government assistance programs.

Agencies were asked about the status of at-risk units for the following programs: HUD Section 8, Section 101, Section 213, Section 221(d)(3), Section 236, Section 202, FmHA Section 515, State and local revenue bond programs, redevelopment programs, local in-lieu fee or inclusionary programs, Community Development Block Grant programs, and density bonus and direct government assistance programs.

COST ANALYSIS

Although considered unlikely, the potential for conversion of the Burney project does exist. Accordingly, a cost analysis that compares preservation costs against new construction costs is required by state law. Costs may be estimated on any order of magnitude that allows a comparison of costs to be made. For this study, the Shasta Housing Development Corporation was contacted and they determined they would purchase the units, if financially feasible. In addition, two non-profit companies specializing in rehabilitation and construction of low income housing were contacted by the Nevada County Planning Department to determine cost differences in affordable housing preservation and construction. The adopted Nevada County Housing Element, found "in compliance" by HCD, provides the following information:

1. Lynda J. Timbers, Project Go, Inc., stated: "Due to the high cost of planning, environmental analysis and providing infrastructure, new construction is more expensive than the preservation of existing units."

2. Stanley Keasling, Rural California Housing Corporation, stated: "The Rural California Housing Corporation has not constructed any low income housing projects that were lower in cost than preserving the same number of existing units.

Source: Harland Bartholomew & Associates, Inc., 1992.

PRESERVATION RESOURCES

Preservation resources are categorized into nonprofit entities capable of acquiring and managing at-risk projects and potential preservation financing sources (including estimates of available funds).

As previously stated the Shasta Housing Corporation stated they would purchase the Burney Units, if financially feasible.

State law requires that each housing element identify and consider all federal , state and local financing and subsidy programs that could be used to preserve assisted housing for use by low-income residents. This analysis should include an estimate of the amount of each type of funds which could be available to preserve assisted housing. The financing sources which must be considered include the following:

1. Community Development Block Grant Funds (CDBG)

2. Redevelopment agency tax increment funds, including, but not limited to, those from the Low and Moderate Income Housing Fund

3. Administrative fees (i.e., reserves) of any housing authority operating within the community.

The State of California administers the Federal Community Development Block Grant program for non-entitlement cities and counties throughout the state. Non-entitlement jurisdictions include those cities with populations of less than 50,000 and counties with populations less than 200,000 that do not automatically receive U.S. Department of Housing and Community Development Block Grant Funds. Shasta County is one of the 180 small cities and counties in the state eligible to apply for these CDBG funds.

The Shasta County Housing Authority is able to apply directly to the federal government for funding of housing programs and has access to a broader range of programs and financial assistance. In addition, the Housing Authority will accrue fees for its administration of these programs which could be used for the preservation of at-risk units.

Chapter 9 Footnotes

(1) Department of Housing and Community Development, Regional Housing Needs Plan for Shasta County January 1991 to July 1997. (RHNP) Page 2.

(2) RHNP Page 3.

(3) RHNP Page 3.

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Appendix A

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U.S. Bureau of the Census, Summary Tape File 3 (STF 3),1990, Shasta County.

Shasta County General Plan and Shasta County General Plan Background Reports,1994.

Shasta County Zoning Ordinance

Directory of Housing Programs, Department of Housing and Community Development

Local Officials Guide to Affordable Housing Development, Department of Housing and Community Development

Local Government Mobilehome and Mobilehome Park Policies in California, Department of Housing and Community Development

Home Equity Conversions for Seniors, Department of Housing and Community Development

Appendix B

PERSONS CONTACTED

1. Jim Cook, Division Manager, Shasta County Resource Management Department, Planning Division

2. Mark Radabaugh, Senior Planner, Shasta County Resource Management Department, Planning Division

3. Jerry Brown, Director, Shasta County Community Action Agency

4. Housing Element Advisory Committee:

   Roy W. Misner, Shasta County Commission on Aging
   Mana Davis,Shasta Senior Nutrition Programs, Inc.
   Melinda Brown, Dirctor, People of Progress
   Jerry Brown, Shasta County Housing
   Kent Dagg, Shasta Builders Exchange
   Eileen McCarthy, Legal Services of Northern California
   Marie Whitaker, Executive Director, Shasta County Board of Realtors
   Marie Ritucci, Director, Shasta Housing Development Corp.
   Debbie Parker, Compliance Officer, Redding Bank of Commerce

5. James M. Underwood, Shasta County Deputy County Counsel

6. Pat Mitchell, Employment Development Department

7. Tom Witiker, Shasta County Board of Realtors

8. Jess Miller, Good News Rescue Mission

9. Golden Umbrella

10. Mrs. Wingfield, Shasta County Social Service Department

11. Polly VanBenthusen, Social Security Administration, Shasta County

12. Keith Johnson, Farmers Home Administration

13. Mary Cull, Farmers Home Administration

Appendix C

GLOSSARY

Age - The age classification in the 1990 Census is based on the age of the person in completed years as of april 1, 1990.

Census Designated Place - is a densely populated unincorporated area with a population threshold of 1,000 residents.

Condominium - Ownership that enables a person to own an apartment or house in a development of similar units and hold a common or joint-ownership in common areas, hallways, entrances, elevators, etc. The owner has a deed to the individual unit, and, very likely, a mortgage on the unit, and also holds a common or joint ownership in all common areas, such as grounds, lobbies, and elevators. A condominium unit need not be occupied by the owner to be counted as such.

Conserved Housing - Housing whose condition is reconstructed or restored to basic standard after being in a condition of serious dilapidation.

Dwelling Unit - One (l) or more habitable rooms which are designed to be occupied by one (l) family with facilities for living, sleeping, cooking, eating, and sanitation.

Elderly - Persons 60 years of age and older (Older Americans Act 1965 PL 89-73 Sec. 302 (9)). Persons 65 years of age and older are also listed as some grants require statistics for persons 60 years of age and older and others require 65 years and older.

Gross Rent - Monthly contract rent plus the estimated average monthly cost of utilities and fuels, if these are paid by the renter.

Group Quarters - Includes all persons not living in households in the 1990 Census. Two general categories of group quarters are recognized: 1) Institutionalized persons and 2) persons who live with unrelated persons.

Hispanic Origin - Persons of Hispanic origin are those who classified themselves in one of the specific Hispanic origin categories listed on the questionnaire. Hispanic origin can be viewed as the ancestry, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the U.S. Persons of Hispanic origin may be of any race.

Family - Two or more persons, including the householder, who are related by birth, marriage, or adoption, and who live together as one household.

Feasible - Capable of being done or carried out.

Household - The person or persons occupying a housing unit.

Housing Units - A house, apartment, mobilehome or trailer, group of rooms, or single room occupied as a separate living quarter or, if vacant, intended for occupancy as a separate living quarter. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall.

Income Levels - The definitions given below are based on definitions contained in state law. The statutory definitions provide that each household size has its own income ranges.

The income ranges for a four-person household are the following:

a. Very low income;

b. Low income;

c. Moderate income, and

d. Above moderate income.

The income ranges for other household sizes are calculated using household size adjustment factors. For example, the income ranges for a one person household are .7 times the income ranges for the four person household for that income level. (Note: state and federal agencies adjust these percentage to account for family size in determining income limits for housing assistance programs.)

Health and Safety Code Sections 50079.5, 50093, and 50105.

Very Low - Less than 50% of the county median income.

Low - Between 50% and 80% of the county median income.

Moderate - Between 80% and 120% of the county median income.

Above Moderate - Above 120% of the county median income.

Labor Force (Employment) Status - The series of questions on employment status in the 1990 Census were designed to identify, in this sequence: (1) persons who worked at any time during the reference week (employed); (2) persons who did not work during the reference week but had jobs or businesses from which they were temporarily absent (excluding layoff) (employed); (3) persons on layoff (not in labor force); and (4) persons who did not work during the reference week, but who were looking for work during the last four weeks and were available for work during the reference week (unemployed).

Middle Income - Government Code Section 65008 (c) "persons and families of middle income" means persons and families whose income does not exceed 150 percent of the median income for the county in which the persons or families reside.

Mean - The average of a range of numbers.

Median - The mid-point in a range of numbers.

Mobility Limitation Status - Persons were identified as having a mobility limitation if they had a health condition that lasted 6 or more months and which made it difficult to go outside the home alone such as going shopping and visiting the doctor's office.

Multi-family Dwelling Unit - A building or portion thereof designed for or occupied by two (2) or more families living independently of each other, including duplexes, triplexes, quadruplexes, apartments, and condominiums.

Nonfamily Households - Includes a householder living alone or with nonrelatives only.

Overcrowding - Households or occupied housing units with 1.01 or more persons per room.

Owner-occupied Housing Units - Includes on one-family houses on less than 10 acres without a business or medical office on the property in the 1990 Census.

Poverty Status in 1989 - Poverty status was determined for all persons except institutionalized persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years old. The average poverty threshold for a family of four persons was $12,674 in 1989 as reported by the 1990 Census.

Race - The concept of race as used by the Census reflects self-identification; it does not denote any clearcut scientific definition of biological stock.

Rational - Having reason or understanding.

Reasonable - Sound judgement, action, or statement.

Selected Monthly Owner Costs - The sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property; real estate taxes; fir, hazard, and flood insurance on the property; utilities; and fuels.

Single Family Dwelling - A building or buildings designed for or occupied exclusively by one (l) family, excluding a mobilehome. Includes both detached and attached (townhouses) single family units.

Vacant Housing Units - In the 1990 Census a housing unit is vacant if no one is living in it at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by persons who have a usual residence elsewhere are also classified as vacant.

Value - Value is the respondent's estimate of how much the property (house and lot, mobile home and lot, or condominium unit) would sell for if it were for sale in the 1990 Census.

Year-round Housing Units - All occupied units plus vacant units intended for year-round use, but excluding vacant units held for seasonal use or migratory labor.

Appendix D

ADDITIONAL INFORMATION

1. The Federal Energy Department will help you keep your home warm during the winter. The Conservation and Renewable Energy Inquiry and Referral Service is staffed to answer your questions abut caulking, weatherstripping, solar energy, recycling and other energy problems. Call (800) 523-2929.

2. Government surplus auctions have buys on appliances, lawn mowers, tools, and other useful items to build, repair, or furnish a home. The auctions are run by various agencies. Start with the U.S. General Services Administration and then check other federal, state, and local agencies.

3. The U.S. Labor Department creates part-time jobs for older persons through its Senior Community Service Employment Program. Benefits include help with transportation, nutrition and health problems. Employees work at senior centers, schools and hospitals. Senior centers can help with housing discrimination information and help monitor other information programs for seniors, such as seniors with construction experience helping seniors and teaching high school and college students who in turn help seniors. Check with the state job-service office, state or local agency on aging, or the Labor Department at (202) 523-6871.

4. Seniors starting a business to help other seniors with housing problems can get advice from retired business people through the Service Corps of Retired Executives (SCORE) in the Small business Administration. Call (800) 827-5722.

5. Education can help people know more about housing opportunities and their options. Adults who can't read can get help through the Education Department. If you know someone who wants, or needs, to learn to read tell them to call (800)-228-8813.

6. Housing Advocates can monitor housing programs and enlist the aid of high school and college students, teachers, and counselors. Some classes might even take on a project for a semester or the school might give work experience credit.

7. The local builders exchange can give classes to help high school and college students and seniors learn more about the construction trades to help seniors and the economically disadvantaged with their housing repair problems.

8. The local newspapers can print information features on Fair Housing and local people helping local people meet their housing needs.

9. Disabled persons can get help by calling (800)-875-4663 to get a free brochure on accessibility features and adaptation tips. A list of organizations offering accessible designer services and kitchen and bath products is also available. The program consists of a referral service to help people identify and find accessible or adaptable housing, remodel for accessibility and purchase accessible products and services.

10. Reverse mortgages provide cash to homeowners, and most require no repayment for as long as the owner lives in the home. The loan is repaid when the owner dies, sells the home, or permanently moves away. There are three types of loans offered by State and Local governments and three other types of loans are offered through the private sector by various mortgage lenders.

11. Kentucky has made below-market-rate loans to low- and moderate- income families through a network of commercial lenders with interest rates as low as 1%. Other states lend money at low interest rates for down payments and closing costs and offer extra tax breaks. For more information on state housing agencies contact the National Council of State Housing Agencies, 444 N. Capitol St., NW Suite 118, Washington, DC, 20001.

12. Affordable Housing Disposition Program. Auction catalogs and qualification information is available by calling 1-800-334-1032.

13. Dual-indexed mortgage (DIM) is tied to two indexes rather than just one, used in Europe and not the USA. Adjusted Rate Mortgage (ARM) give protection the lender so service of lending rate (guess on inflation) added to the real rate is lower. Price level adjusted mortgage (PLAM) only real rate charged, adjusted periodically on actual inflation. DIM is based on 20 years and not as radical as PLAM when inflation skyrockets. DIM makes it easier for low- and moderate-income families to become and remain homeowners.

14. Condominiums, knowing the rules. For more information, check the Homeowners Association Manual ($ 17.45 from Suncoast, P.O. Box 10094, Tallahassee, Fla. 32302).

7.4 CIRCULATION

7.4.1 Introduction

The circulation element is concerned with the movement of people and goods. Section 65302(b) of the Government Code requires that the circulation element address the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities. Circulation is functionally interrelated with the land use pattern prescribed in the Community Organization and Development Element and has major implications for other elements, including noise, air quality, energy and community design. Section 65302(b) requires that a circulation element be correlated to the land use element.

Findings

7.4.2 Components of the Circulation System

The circulation system of Shasta County comprises several physical components, some of which may be used by more than one mode of transportation. The level of treatment of each transportation mode by the circulation element reflects its importance to the overall system.

Highways and Streets

Highways and streets are the most extensive components of the County's circulation system and are used by both vehicular and nonvehicular modes of transportation. The automobile is the dominant mode of vehicular transportation, followed by trucks, buses, taxicabs, and bicycles. Nonvehicular modes of transportation include walking and horseback riding. Not all of the above modes of transportation can use the same highway or street at the same time without special provisions to avoid conflicts. Bicycle, pedestrian, and equestrian modes require the reservation of a portion of the right of way for their exclusive use.

Public Transportation includes the Redding Area Bus Authority which services the City of Redding and surrounding urbanized area along fixed routes, as well as demand response service, four interregional bus lines, a local bus service between downtown Redding and the Redding Municipal Airport, three local taxicab companies, several social service transportation systems serving the elderly and the disabled and school buses.

Interstate 5 is the major highway in Shasta County and its intersection in Redding with other State and County roads, including Routes 299 and 44, forms the focal point for the highway transportation network of the County. In the eastern portion of the County, Route 89 provides a north-south link between Routes 299 and 44.

Railroads

Shasta County is served by two railroad lines: The Southern Pacific single track main line which parallels Interstate 5, and the McCloud Railway Company, a single track short line running from McCloud to Burney. Southern Pacific carries both passengers and freight, while the McCloud hauls only freight. Railroad transportation supplements and, in some instances, directly competes with transportation provided by trucks.

Air Travel

There are four publicly operated airports in the County. Redding Municipal and Benton Field are owned by the City of Redding. Shasta County owns the Fall River Mills airport and leases the Shingletown Airport. Redding Municipal provides scheduled air carrier service while charter service is available at Benton Field and Redding Municipal Airport. Two privately owned airports, Enterprise Sky Park and Redding Sky Ranch, are located in Shasta County. The Shasta County Airport Land Use Commission (ALUC), which consists representatives from the Cities and County, is charged with administering airport land use plans in the vicinity of public airports.

Pipe and Transmission Lines

Pacific Gas and Electric operates several natural gas pipelines within the County, and PG&E and the Central Valley Project maintain electric transmission lines serving hydroelectric projects throughout the County. Pacific Power and Light Co., the City of Redding, and the Shasta Dam P.U.D. also have electrical transmission facilities in the County. Figures C-1A and C-1B show the general location of major utility corridors in the County.

County Overview

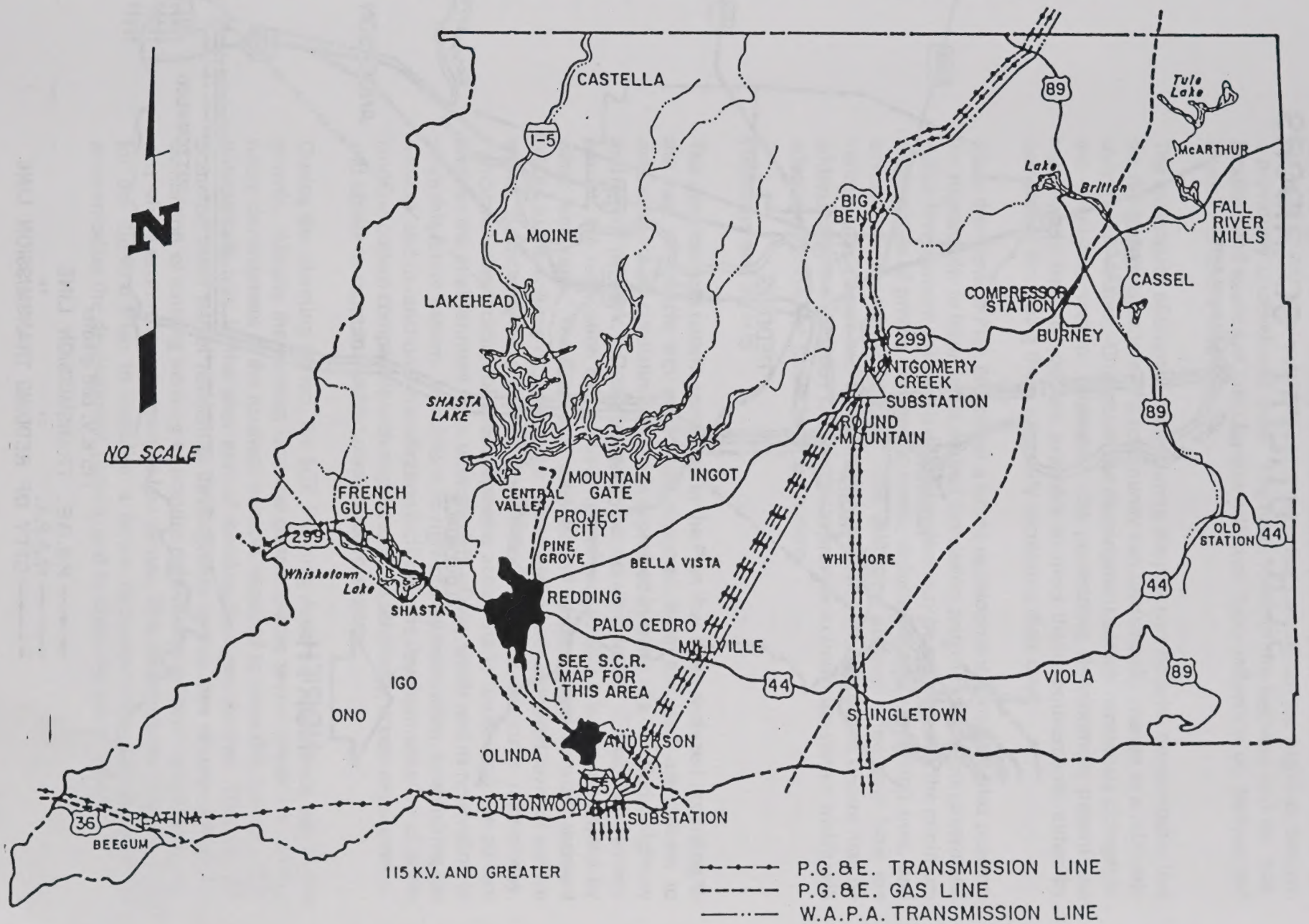
The most important features of the circulation system in Shasta County are its dependence on the automobile and the location of a major multi-modal (auto, truck, bus, rail, air, and pipe and transmission line) transportation corridor through the SCR Planning Area.

7.4.3 Relationship of the Circulation System to the Land Use Pattern

The circulation system and land use development pattern of a community are interdependent. A particular development or land use pattern will generate specific, quantifiable circulation requirements. The range of options available to meet these requirements will be largely determined by the existing development pattern. To use simplistic examples, the option of providing an airport to meet the need for fast freight delivery will be limited by acceptable terminal locations and by the existing development pattern. Likewise, the option to widen a roadway to increase its capacity will be limited by the land use pattern adjacent to the existing right-of-way.

FIGURE - - C-1A

REGIONAL UTILITY CORRIDORS

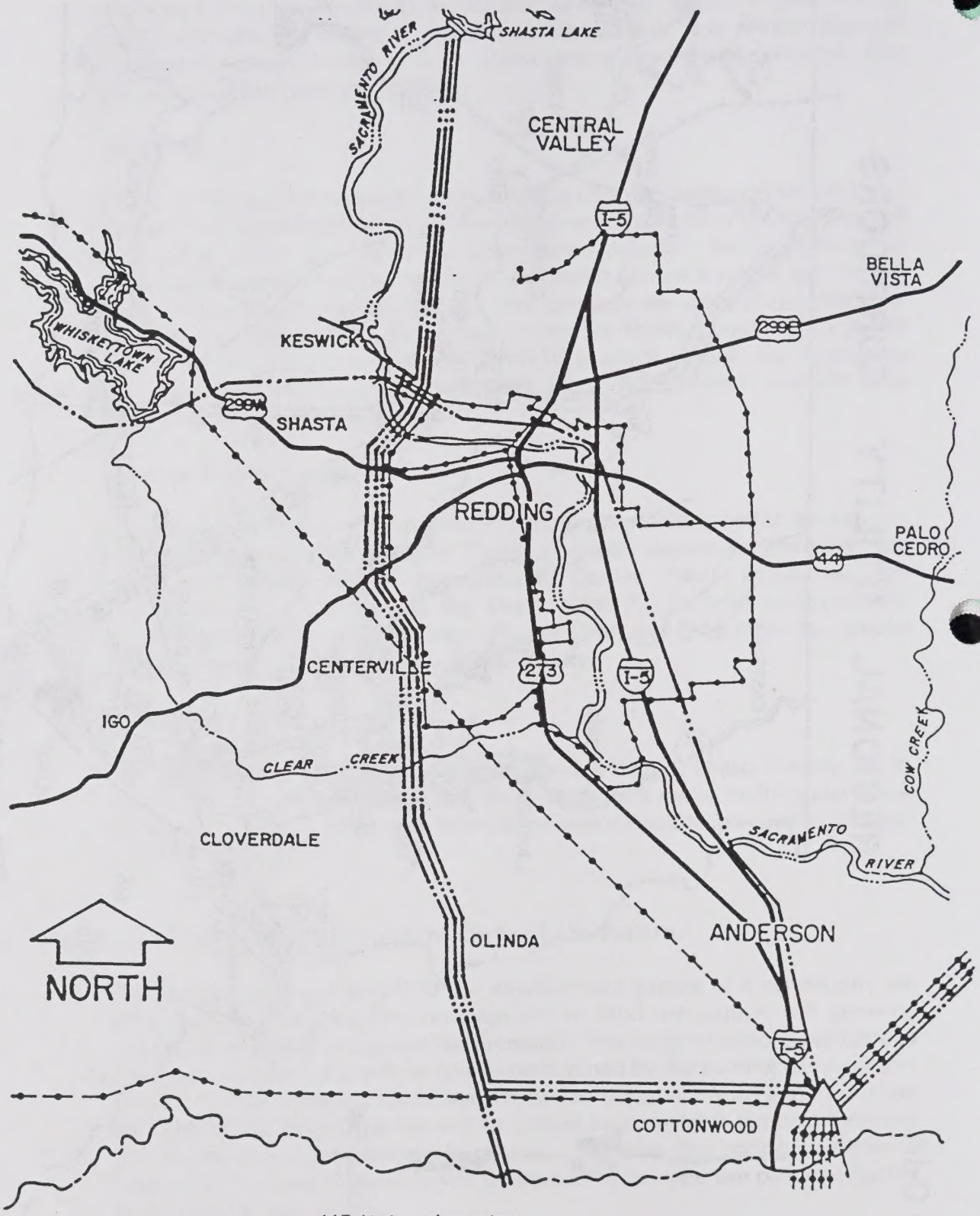


SOURCE: P.G.&E., W.A.P.A., '92

K/92

FIGURE – C-1B

S.C.R. UTILITY CORRIDORS



115 K.V. and greater

P.G.&E. TRANSMISSION LINE

W.A.P.A. " "

CITY OF REDDING TRANSMISSION LINE

SOURCE: P.G.&E., W.A.P.A., City of Redding, '92

K/92

Conversely, the design of a circulation system in a certain geographic area will play a major role in shaping its future development pattern. The most dramatic example of this relationship is the construction of an interstate highway through a previously undeveloped area. The exact route of the highway and the size, location, and spacing of interchanges will exert major influences on the type and intensity of future land uses.

The experience of Shasta County during the past two decades demonstrates that the development pattern of a community can substantially change in a relatively short period of time. Changes in the development pattern necessitate changes in the circulation system. However, the pre-existing development pattern can significantly limit the options available to meet these requirements, either by completely excluding them or greatly increasing their costs.

Since the General Plan prescribes a future development pattern, it also presents the opportunity to formulate a desired circulation system to serve this pattern and guide development so that this desired system may be realized with the minimum expenditure of private and public funds, dislocation of existing land uses, and adverse environmental impacts. The following discussion indicates how the various components and transportation modes of the circulation system may be addressed by the General Plan in order to provide a circulation system which will adequately serve the future land use pattern.

Highways and Streets

The development pattern contained in the Plan has been analyzed according to the rate of vehicle trip generation expected from the land use pattern to determine future circulation demands expressed in terms of a functional highway and street network. Designation of the network in the Circulation Element permits the reservation of its future right-of-way so that it is not preempted by other land uses. The functional classification of each street network segment relates to the volume of traffic to be served along with a desired level of service which is determined primarily by the width of the vehicular right-of-way. Functional classification of street segments according to future land use pattern enables the establishment of an ultimate right-of-way width and its reservation to serve this future pattern. In addition to right-of-way reservation, establishing the network and its functional classification facilitates the development of an adjacent land use pattern compatible with respect to noise sensitivity, access requirements, and ability to support a public transportation system.

During the planning period, the SCR Planning Area will experience significant growth. Already the existing land use pattern places severe limitations on the future development of the roadway network required to serve this growth. This is especially true in the area east of Redding between Routes 299 and 44. Scattered small parcel residential development in this area dictates either the demolition of existing housing to acquire right-of-way or moving further to the east where existing development is less dense. This area demonstrates the need for the General Plan to establish a future circulation network designed to accommodate the development pattern, and to faithfully adhere to it.

Rail

The development pattern contained in the Plan and the industrial land uses contained in the pattern will generate demands for rail service. Since the railroad rights-of-way in Shasta County, including service spurs, are fixed and not likely to be expanded, it is important to ensure that lands now served by rail are reserved for land uses requiring this service. The development pattern should also locate land uses sensitive to the noise impacts of rail at sufficient distances from the right-of-way. Finally, the railroad system should be integrated with other elements of the circulation system, both to avoid conflicts (e.g., at-grade crossings) and to mutually support one another.

Air

The future economic development of Shasta County will in part depend on the level of service provided by Redding Municipal Airport. The development pattern in the vicinity of the airport should permit the future growth of the airport, both in terms of expansion of its physical land area and the type of equipment used. Noise and safety impacts of future airport expansion are the critical issues. The development pattern should also prevent lands surrounding the airport from being preempted by uses, such as residential, which do not make optimum use of air service.

Pipe and Transmission Lines

Interregional transportation of energy to California from other western regions of North America requires construction of extensive pipeline networks for natural gas and high voltage transmission lines for electricity. The siting and project review of these interregional energy transportation projects comes under the authority of the Federal Energy Regulatory Commission (FERC) and the State Public Utilities Commission. Associated project activities, such as temporary construction and storage sites, which are located on private lands are subject to the County's land use regulations.

7.4.4 Relationship of Circulation System to Noise, Air Quality, Energy, Safety, and Public Finance

The circulation system has important implications for noise, air quality, energy consumption, public safety, and the costs of road construction and maintenance. These relationships are outlined below.

Noise

Certain land uses, such as residences, schools, and hospitals are more sensitive to noise generated by motor vehicles than are other land uses. The circulation system, both as it exists now and as it will exist in the future, can be analyzed and its noise impacts measured. This permits the location of future development to avoid or mitigate these impacts, as provided for in the Noise Element.

Air Quality

The use of the circulation system is dominated by motor vehicles which consume fossil fuels and thereby generate emissions that degrade air quality. Air quality degradations caused by these emissions impact health, and safety and aesthetic qualities.

The SCR Planning Area contains a major multi-modal transportation corridor. This planning area also encompasses much of the extreme northern portion of the Sacramento Valley Air Basin. Automobile emissions are the primary cause of air quality degradation within the SCR Planning Area. Some portion of the total auto emissions are associated with traffic passing through the County, but most are caused by auto trips either originating, terminating or occurring within the County.

Another important contributor to air quality degradation in the SCR Planning Area relates to suspended particulate generated by unpaved roads. Unpaved roads are major sources of particulate matter in Shasta County. The effect of unpaved road dust (and all particulate) is to raise the measured levels of total suspended particulate and reduce visibility. The Shasta County Air Pollution Control District estimated that in 1983 about 39% of the inventoried particulate emissions came from unpaved roads. This is the largest single source category, far exceeding all industrial sources in the County. Because most industrial sources are controlled, population growth and development on unpaved roads is estimated to increase this percentage during the planning period, unless the County maintains its air pollution mitigation program for paving roads. This is the largest single source category for particulate, far exceeding all industrial sources in the County.

Energy Consumption

It has been noted that the circulation system in Shasta County is dominated by the automobile. The direct costs of relying on automobiles is still relatively inexpensive and low density land uses limit options to other transportation modes other than the automobile, so there is little incentive to explore alternatives. However, over the long term, the availability of low cost petroleum based fuel products are limited into the next century, as discussed in the Energy Element. Because of the enormous lead time and conversion of capital resources needed to convert away from petroleum dependency, planning efforts made now to encourage alternatives to the automobile will likely contain many long term benefits.

The major alternative to the use of the automobile is the development of a public transportation system serving the SCR Planning Area. This system would use buses that share the vehicular right-of-way with autos and trucks. The key to developing this type of transit system is a supporting land use or development pattern.

A pattern which facilitates transit has the following characteristics: one, it locates residential development within a reasonable walking distance of a transit route at densities sufficient to generate a level of ridership which in turn will support transit service at frequent enough headways so that it offers ~~a~~ viable alternative

to the service provided by the automobile. Residential development within the transit service area should be at an average density of at least seven dwelling units per gross acre. Two, it connects land uses, such as retail districts, labor intensive industries, educational centers, and medical facilities, that generate high traffic volumes and transportation system modal breaks (where a system ends, e.g., Redding Airport). The major destination points designated along the transit service area should be the preferred locations for new land uses which will generate high traffic volumes. The design and site planning of new residential uses that may be served by public transit within the transit service area and of new land uses within and adjacent to destination points should make reasonable provisions for future transit vehicle access.

The existing development pattern in SCR does not have the above characteristics, and if current development trends continue, it will not be achieved. The result will be that any transit system that is developed will require a substantial public subsidy to support its operations.

If an economically feasible transit system is to be a realistic future option in the SCR Planning Area, action should be taken now to guide development in a transit facilitating pattern as described above.

Public Safety

The circulation system has implications for public safety in three important areas. One, the system provides emergency vehicles with access to residences and businesses. Two, the system provides escape routes in the event of personal emergencies and area wide disasters, such as wildland fires that enter into the urban-wildland interface. Last and most importantly, the design and use of the system by vehicle operators has major safety implications for all persons travelling within it. A system which is poorly designed in terms of network routes, road surfaces, and signals and which is improperly used will not adequately provide for public safety.

Public Finance

In 1983 there were 1,246 miles of roads within the County maintained system. The total 1983 budget for road maintenance was $4.2 million, which included snow removal, patching, drainage, cleaning and storm repairs, plus minor and major improvements such as road resurfacing and alignment improvements. Construction of new roads was not included in the 1983 budget. All of this $4.2 million cost is covered by state and federal subsidies, with state funds contributing 88% and federal funds 12%.

In 1991 there were 1,240 miles of roads within the County maintained system. The total 1991 expenditures for road maintenance was $5.2 million, which included the same responsibilities as in 1983. These costs do not include approximately $0.6 million spent on new construction. Approximately one-half of the total 1991 County road budget cost of $5.8 million was funded by state and federal subsidies.

These subsidies are generally not based on the total mileage in the system and in recent years the amount of federal and state subsidies have been declining both in current and constant dollars. The total County road maintenance budget in 1977 was $5.3 million, which included a very small amount of County funds, to maintain 1,228 miles of road. By 1991, the maintenance budget of $5.2 million, after being adjusted for the effects of inflation, represented only $2.5 million in 1977 dollars. In constant 1977 dollars and average maintenance cost per mile the County was able to spend $4,316 per mile in 1977, but only $2,016 dollars per mile in 1991, which represents a 53% decrease in road maintenance value in 14 years.

The amount of state and federal subsidies available to the County has been declining both in current and constant dollars. Therefore, in the future the County will have less money available to maintain both its existing road system plus any new roads which are added to it. The major planning implication here is that public finance considerations support locating new development where it can be served by roads currently within the County's system.

7.4.5 Need for Interjurisdictional Coordination of Circulation Systems and Development Patterns

The circulation system of Shasta County serves the cities of Anderson and Redding as well as unincorporated areas, and the need for interjurisdictional circulation system planning is self-evident. Implicit in coordinated circulation planning is coordinated development planning.

A forum for interjurisdictional circulation planning presently exists in the Regional Transportation Plan for Shasta County, initially adopted by the Shasta County Regional Transportation Planning Agency (formerly the Local Transportation Commission) in 1975 and reviewed by the RTPA every two years. The RTPA is composed of representatives of the two cities and the County. The Regional Transportation Plan must consider and incorporate, as appropriate, the transportation plans of cities, counties, and other local agencies.

Transportation financing and planning implications are further addressed, in part, by the Shasta County Congestion Management Program (CMP), which was adopted by the RTPA during 1991. The CMP is the result of statewide legislation (see Government Code Section 65088 et.seq.) which requires greater integration of transportation, land use and air quality planning in order to obtain certain State distributed transportation funds. The major objectives of this programmatic effort are:

- To make the most effective use of all transportation modes.
- To require local jurisdictions to consider the impact of their land use decisions on the transportation network and to take responsibility for mitigating such impacts.
- To develop measures that will provide relief and prevent congestion and air pollution from occurring.

The CMP is designed as a long term effort that first will identify the congestion management network (or major street, highway and transit system) and the levels of service for its various segments. Based on this network, the CMP then develops and maintains a seven year capital improvement program and sets the framework and schedule for completing program elements with regard to:

- Trip reduction and travel demand.
- Land use impact and analysis programs, including data base and model development. This component is closely related to implementation of the transportation control measures contained in the County's Air Quality Attainment Plan.
- System monitoring, including for transportation system deficiencies.

7.4.6 Circulation Implications of the Development Pattern

Highway and Roads

The land use pattern described in the Community Organization and Development Element of the General Plan has major implications for the highway and road networks in the SCR Planning Area, and to a lesser extent the North East Shasta Planning Area. Of equal importance in SCR are the circulation implications of land use decisions reflected in the General Plans of Redding and Anderson. In the case of Redding, its General Plan addresses a 110 square mile planning area, of which slightly over half, or 58 square miles, includes unincorporated lands.

Given the above status of General Planning in SCR, a detailed assessment of the circulation implications of future development in this Planning Area was completed based on the density and intensity of uses proposed in the Shasta County, Redding, and Anderson land use elements.

The analysis of the traffic implications of growth within SCR and North East Shasta examined all the major roads in the County. A summary is given below of the major corridors leading from the unincorporated areas into the incorporated urbanized areas. Traffic generated by growth in the outlying areas was calculated and assigned to these corridors.

County Highways and Roads

PLACER ROAD WEST OF 273. This corridor will experience traffic increases due to the growth of Centerville and the west side of Redding. As a result of this growth, Placer Street west of Buena Ventura Road will approach its capacity as a two lane road, and the link from this point to Swasey Drive will require 4 lanes.

CLEAR CREEK WEST OF ROUTE 273. This corridor will be affected by the growth of Centerville and industrial uses along the corridor. Traffic analysis of this growth assumed the improvement and realignment of Texas Spring and Honeybee Roads. Analysis indicates that the capacity of this road will be exceeded and additional lanes will be required.

CANYON ROAD WEST OF 273. This corridor will experience traffic increases as a result of growth in the Happy Valley Area. Canyon Road will not be able to accommodate this growth at its present two lanes. A four lane road will be needed.

OLINDA ROAD WEST OF 273. This corridor will be able to accommodate the traffic generated by the growth of Happy Valley.

LAKE BOULEVARD WEST OF 273. This corridor will experience major traffic increases as a result of growth in the Central Valley Area. Lake Boulevard will require major improvement and expansion to four lanes is recommended.

OASIS ROAD WEST OF INTERSTATE 5. The existing two lane facility will not have adequate capacity to handle anticipated traffic volumes. A four lane road will be needed.

QUARTZ HILL ROAD WEST OF ROUTE 273. The linkage between Quartz Hill Road and Route 273 will require improvement to accommodate growth in the Quartz Hill area. Quartz Hill Road will require 4 lanes to accommodate this growth.

OLD OREGON TRAIL BETWEEN OASIS AND ROUTE 44. This corridor will experience significant increases in traffic due to the growth in the areas designated by the Plan as Stillwater and Upper Churn Creek. A four lane highway between Route 44 and Shasta College will be required to accommodate this growth.

State Highways

A. SCR INTERCHANGES: INTERSTATE 5 AND STATE ROUTE 299:

The following is a listing of interchanges which will require reconstruction to accommodate the additional growth in their vicinities (see Attachment 1):

I-5
- Gas Point Road Interchange
- Deschutes Road Interchange
- Knighton Road Interchange
- Oasis Road Interchange
- Pine Grove Avenue Interchange
- Mountain Gate Interchange

SR 299
- Old Oregon Trail Interchange

SR 44
- Silver Bridge Road

All interchanges listed above will require reconstruction to accommodate growth related traffic, therefore, costs to construct these improvements will be born primarily by local agencies through the establishment and adoption of Interchange Benefit Zones or other appropriate local funding mechanism.

Currently, several interchanges (Oasis Road, Knighton Road, Deschutes Road, and Mountain Gate) are being studied by Caltrans to aid local jurisdictions in establishing Interchange Benefit Zones and to allow protection of the necessary right-of-way from development encroachment. Several development projects have been conditioned by Shasta County and the Cities of Redding and Anderson to participate in Interchange Benefit Zones when they are adopted formally.

B. STATE HIGHWAY PLAN CIRCULATION IMPROVEMENTS AND RIGHT-OF-WAY RESERVATION NEEDS:

1. INTERSTATE 5:

The Interstate 5 freeway's primary function is to serve international and interstate travel from Mexico to Canada. However, it also serves as an interregional and commuter route for the Redding/Anderson area.

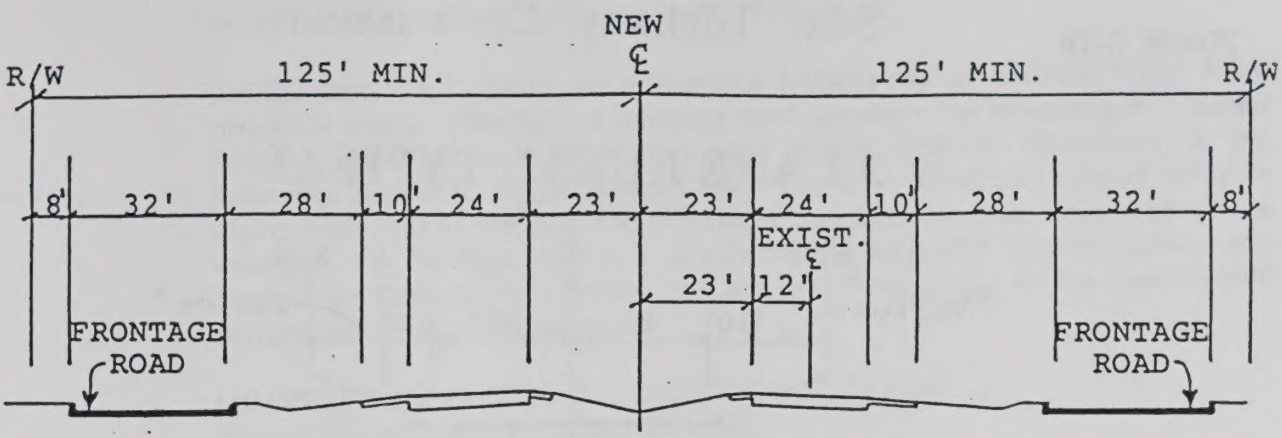
2. ROUTE 44:

Route 44 is a major east-west route connecting Redding and much of Northern California to Susanville and Nevada. It is classified as a Rural Principal Arterial and its primary purpose is to serve interregional and interstate travel. Route 44 also serves as a commuter route for Redding and its suburbs, and as a recreational route for Lassen National Volcanic Park. It is a principal arterial serving interregional and interstate travel.

FIGURE C-1C

State Highway Cross sections

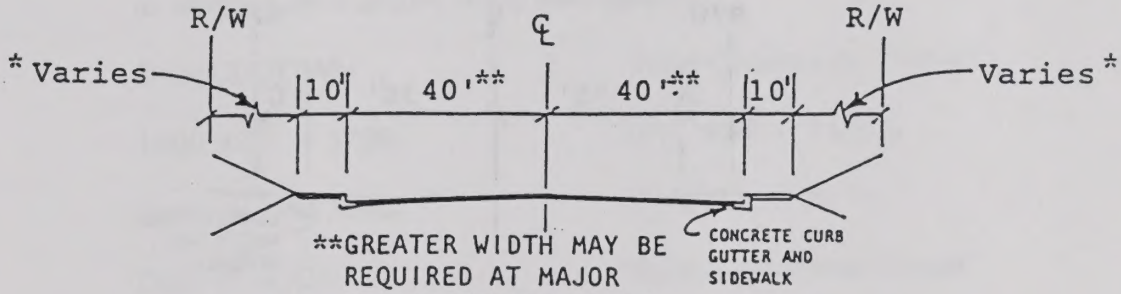
EXPRESSWAY TYPICAL



MIN. R/W NECESSARY TO CONSTRUCT A 4-LANE SUBURBAN EXPRESSWAY (WITH ROOM FOR FUTURE 6-LANES AND 20' MEDIAN) AND FRONTAGE ROADS.

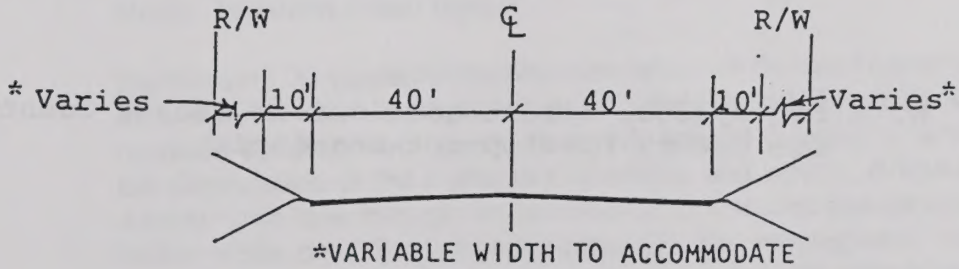
NO ACCESS BETWEEN FRONTAGE ROADS AND EXPRESSWAY EXCEPT AT DESIGNATED INTERSECTIONS.

5 LANE URBAN TYPICAL



**GREATER WIDTH MAY BE REQUIRED AT MAJOR INTERSECTIONS OR AT DRIVEWAYS TO MAJOR DEVELOPMENTS.

5 LANE RURAL TYPICAL



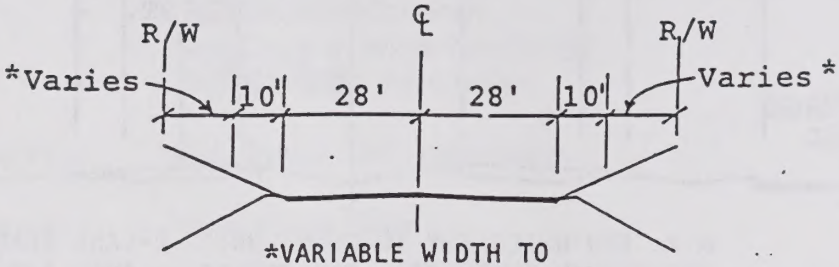
*VARIABLE WIDTH TO ACCOMMODATE SIDESLOPE OR DRAINAGE. (WIDTH IS ZERO FOR FLAT TERRAIN AND WHEN THERE ARE NO DRAINAGE CONCERNS)

NOTE: For typical street sections in Shasta County, see County Development Standards

FIGURE C-1D

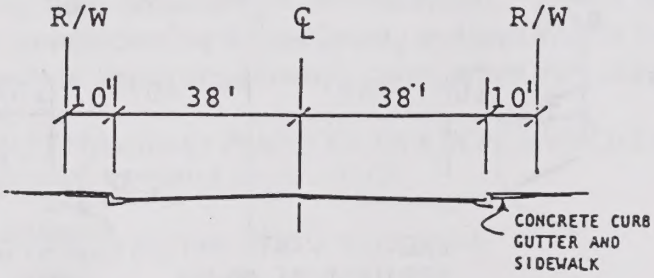
State Highway Cross sections

3 LANE RURAL TYPICAL



*VARIABLE WIDTH TO ACCOMMODATE SIDESLOPE OR DRAINAGE.(WIDTH IS ZERO FOR FLAT TERRAIN AND WHEN THERE ARE NO DRAINAGE CONCERNS)

STATE RTE. 151 TYPICAL



NOTE:WIDTHS MAY BE MODIFIED AS NECESSARY FOR COMPATIBILITY WITH EXISTING OR PROPOSED DEVELOPMENTS.

NOTE:For typical street sections in Shasta County, see County Development Standards

AIRPORT ROAD TO MILLVILLE PLAINS ROAD

Limits in Post Miles: PM 3.63 to 10.77

Need: Add a two-lane collector south of Route 44.

Justification: Right-of-way for a four-lane freeway out to Millville Plains Road presently exists. Therefore, a frontage road between the existent and planned interchanges and overcrossing (pursuant to the Freeway Agreement) at the following locations: Airport Road, Deschutes Road, Silverbridge Road, Millville Plains Road will be necessary to provide access to those areas in between these locations. A frontage road will accommodate long-term growth during and beyond the General Plan period, and aid in reducing trips on the freeway and congestion at the interchanges.

MILLVILLE PLAINS ROAD TO LASSEN COUNTY LINE
(Except Shingletown, Viola and Old Station)

Limits in Post Miles: PM 10.77 to 71.39

Need: Protect existing highway right-of-way corridors as follows: minimum width of 100 feet, maximum width per "five-lane Rural Typical" controlled by terrain and/or drainage.

Justification: Protecting a 100-foot minimum corridor along Route 44 will provide enough width to ultimately construct a four-lane facility with a center-turn lane, shoulders, and side slopes. This would be adequate to sustain an acceptable LOS as development occurs along the highway.

SHINGLETOWN	"Rural Community Center"
1990 ADT = 3700	2010 ADT = 11,100
Limits in Post Miles:	PM 27.40 to 28.10
OLD STATION	"Rural Community Center"
1990 ADT = 1400	2010 ADT = 2240

Limits: From Rim Rock Ranch Grocery Store (PM 61.90) to the Junction of State Routes 44/89.

Need: Five-lane urban typical

Justification: As roadside development occurs in the rural community center area, local traffic will increase, resulting in a decreased LOS on Route 44. Typically, roadside development creates randomly spaced driveways, which contribute to the degradation of the highway's operation and safety. A four-lane facility with a center-turn lane through the community center area should accommodate local traffic while providing an adequate LOS for interregional traffic. Since this community center has a mix of commercial, retail and recreational uses, walking-paths will be necessary to provide a safe passage for pedestrians within the community center.

VIOLA "Rural Community Center"

1990 ADT = 1350 2010 ADT = 2430

Limits: From the City Limit sign (42.63) to 0.20 miles beyond the Brokeoff Meadows Road connection (43.10).

Need: Five-lane rural typical

Justification: As roadside development occurs in the rural community center area, local traffic will increase, resulting in a decreased LOS on Route 44. Typically, roadside development creates randomly spaced driveways, which contribute to the degradation of the highway's operation and safety. A four-lane facility with a center-turn lane through the community center area should accommodate local traffic while providing an adequate LOS for interregional traffic.

3. ROUTE 89:

This section of Route 89 serves as an important link between Routes 44 and 299. It also acts as a recreational route and emergency detour route.

HAT CREEK "Rural Community Center"

1990 ADT = 1800 2010 ADT = 2880

Need: Three-lane rural typical

Limits: From 0.5-mile before to 0.5-mile beyond the Hat Creek Post Office.

Justification: As roadside development occurs in the community center area, local traffic will increase, causing a decrease in highway operation and safety. Turn movements at access locations disrupt the flow of through traffic if appropriate turn lanes are not provided. A three-lane facility through the community center area will accommodate the left turns of local traffic, thus minimizing the impacts to "pass-through" traffic.

4. ROUTE 151:

Route 151 is a 6.9-mile urban minor arterial stub route beginning at Shasta Dam. The first 3.8 miles serve recreation and tourist traffic and is a designated scenic highway. The last portion of the route is a commuter and business street in a fast growing urbanized area.

SUMMIT CITY/CENTRAL VALLEY/PROJECT CITY

Need: Route 151 urban typical.

Limits: Lake Boulevard (PM 3.78) to Project City interchange at I-5 (PM R6.92).

Justification: Safety is a major concern on highways through busy town centers as well as improving operational efficiency. A four-lane facility with a center-turn

lane allows turning traffic to access roadside development with little disruption to through traffic, thus improving safety. Sidewalks or walking-paths are necessary to safely accommodate the substantial pedestrian traffic typical of town centers.

Most of this route is within the boundaries of the Shasta Dam Area Redevelopment Agency. The Redevelopment Agency's goals are to make needed public improvements, including upgrading Route 151 through the urbanized area. The Route 151 Typical adapts the Agency's concept for improving the highway.

5. ROUTE 299:

Route 299 east of Redding is a rural minor arterial serving interregional traffic as well as commuter traffic for Redding and its suburbs. As development expands east of Redding, it is important that an appropriate right-of-way corridor for transportation facilities is planned for and protected.

STILLWATER CREEK TO SALT CREEK

Need: Expressway typical

Limits in Post Miles: PM 27.95 to PM 34.57.

Justification: The Expressway typical would allow for a four-lane suburban expressway and frontage roads.

The right-of-way should be protected such that the existing highway can be used for one direction of traffic. Beginning just after Stillwater Creek, the existing highway will be the westbound lanes for the expressway. From Stillwater Way to 1/4-mile past Jim Harvey Road, the right-of-way should shift so that the existing highway will become the eastbound lanes as shown on the Expressway Typical. From there, the existing highway will be the eastbound lanes all the way to Salt Creek. By protecting the right-of-way in this manner, fewer homes and businesses will be affected when the expressway is constructed.

SALT CREEK TO LASSEN COUNTY LINE

(Except Round Mountain, Montgomery Creek, Burney, Johnson Park, Fall River Mills, and McArthur)

Limits in Post Miles: PM 34.59 to 99.36

Need: Five-lane Rural Typical to protect the existing highway right-of-way corridor (minimum width 100-foot; maximum width controlled by terrain and/or drainage).

Justification: This portion of Route 299 serves interregional traffic, as well as commuter traffic for Redding, Burney, Fall River Mills, and McArthur. The route is classified as a rural minor arterial. Protecting a 100-foot-minimum corridor along Route 299 (maximum controlled by terrain and/or drainage) will provide enough width to ultimately construct (if required) four lanes, a center-turn lane,

shoulders, and side slopes. This should be adequate to sustain an acceptable LOS as development occurs along the highway.

ROUND MOUNTAIN "Rural Community Center"

1990 ADT = 2700 2010 ADT = 4860

Limits: 0.45 miles west of Terry Mill Road (PM 52.81) to 0.20 miles east of Terry Mill Road (PM 53.46)

MONTGOMERY CREEK "Rural Community Center"

1990 ADT = 2700 2010 ADT 4860

Limits: From Montgomery Creek Falls Road (PM 55.39) to 0.1-mile past road to Montgomery Creek School (PM 57.00).

Need: Five-lane urban typical (may consider entering into deferral agreements for curb, gutter, and walking-paths, on a case-by-case basis).

Justification: Route 299 east of Redding is a rural minor arterial of interregional importance. As roadside development occurs in the above Rural Community Center areas, local traffic will increase, resulting in a decreased LOS on Route 299. Typically, roadside development creates numerous randomly spaced driveways which contribute to the degradation of the highway's operation and safety. A four-lane facility with a center-turn lane through the community center area should accommodate local traffic while providing an adequate LOS for interregional traffic. Because of the area's rural nature, the County may not want to require sidewalk construction for several years, therefore, a deferral agreement to construct walking-paths at some future date will be considered on a case-by-case basis.

BURNEY "Town Center"

1990 ADT = 10,200 2010 ADT = 16,320

Limits: From the Burney sign (PM 74.00) to Black Ranch Road (PM 76.18).

JOHNSON PARK "Town Center"

1990 ADT = 4700 2010 ADT = 7520

Limits: From the CDF Burney Forest Fire Station (PM 77.95) to 0.2-mile past Rocky Ridge Road.

FALL RIVER MILLS "Town Center"

1990 ADT = 5000 2010 ADT = 8000

Limits: From the western edge of the Fall River Golf and Country Club development (PM 90.50) to 0.45-mile pst Sierra Center Drive (PM 93.83).

McARTHUR "Town Center"

1990 ADT = 4200 2010 ADT = 6720

Limits: From the Pacific Pride Gas Station (PM 94.75) to the Pine Grove Cemetery (PM 96.40).

Need: Five-lane urban typical

Justification: As noted above, Route 299's primary purpose east of Redding is to serve interregional traffic. As a secondary purpose, Route 299 serves as a business and commuter route for several town centers in Shasta County. Town centers generally have an existing commercial area with new development occurring at the ends or occasionally at specific locations within the established area. Local traffic can be extensive causing considerable disruption and safety hazards to interregional traffic.

A four-lane facility with a center-turn lane through the town center area allows local traffic to access the roadside development with minimal disruption to "pass through" traffic. Walking-paths are necessary to safely accommodate the substantial pedestrian traffic typical of town centers.

NOTE: Several of the highway cross-sections are described as either "Urban" or "Rural." These terms do not refer to size or population of a particular community. These designations are instead used to differentiate whether or not curb, gutter and sidewalks (or walking paths) will ultimately be constructed through the business area of a community. Many "Rural Community Centers" have "Urban" typicals because the general layout of their commercial area will stimulate pedestrian movement and would benefit from sidewalks along the highway. In some cases, sidewalks and/or walking-paths may not be necessary or practical during the Plan period. Therefore, in these cases, deferral agreements can be made to postpone the sidewalk construction until a later date. Communities that are primarily "auto oriented" do not generate many pedestrians. In these instances, "Rural" typicals are used since sidewalks and/or walking-paths along the highway frontage is not anticipated.

C. GENERAL STANDARDS FOR RURAL STATE HIGHWAYS:

- In rural areas, public and major private road intersections should be spaced 1500 feet apart. When possible, driveways for residences or various developments should be combined and/or accessed to county roads to minimize turn movements and maximize access spacing on State highways.

- In rural areas along State Highways 44 and 299, easterly of currently proposed expressway limits, a set back policy should be applied. This policy would prohibit the placement of permanent structures within 150 feet of the highway centerline. This will reduce future right-of-way costs and lessen impacts to development.

Railroads

The General Plan development pattern assumes a year 2010 population of nearly 240,000 persons. Realization of this population growth will require substantial expansion of the County's employment base. The major implication of this economic expansion with respect to rail service is that the freight service operated by Southern Pacific Railroad will likely increase in importance and its accessibility to the Mountain Lakes Industrial Park north of Redding and industrial areas south of Redding should be assured.

Air

The economic development of Shasta County will be strongly influenced by development in the vicinity of Redding Municipal Airport. Recognizing the need for careful planning for its future development, the airport and its environs are subject to specific planning requirements jointly adopted by Shasta County and the cities of Anderson and Redding.

The circulation implications of the Redding Airport Specific Plan relate to appropriate uses of lands adjacent to the airport and to the highway and road network required by these uses. Regarding the latter, Airport Road between Highway 44 and the City of Anderson and the linkage of the airport with Interstate 5 via Knighton Road has major circulation implications.

Road Standards Implications of Development Patterns

Land use pattern of an area, specifically the types of uses and the density/intensity of development, will determine its circulation requirements with respect to the network of highways and roads and the functions served by the links in the network. Function relates to the width of vehicular right-of-way, as well as to the standard to which this right-of-way is developed. The functional distinctions among roads are reflected in their varying standards for these key items:

- Type of vehicular surface, paved or nonpaved,
- Width of vehicular surface,
- Drainage improvements, and
- Pedestrian improvements.

In order for Shasta County road standards to adequately respond to the circulation implications of the development pattern, the following changes are necessary. One, a single set of ultimate road standards should uniformly apply to all subdivisions, regardless of the number of parcels to be created. Two, road standards should reflect functional road classifications and density/intensity of land use as determined by the General Plan development pattern. Three, privately maintained roads should meet the same standards as publicly maintained roads and the County should adopt a mechanism for enforcing private maintenance.

7.4.7 Objectives

C-1 Existing road capacity available within the County road system should be used to serve future development prior to constructing new County maintained roads.

C-2 Recognition of the private automobile as currently the primary means of personal transportation in Shasta County, combined with development of a land use pattern which mitigates, where feasible, the adverse air quality and energy consumption impacts of the automobile.

C-3 Encourage development of a land use pattern based on future public transportation needs and alternative methods of transportation which emphasize energy conservation and minimizes vehicle miles traveled.

C-4 Recognize pedestrian and bicycle circulation as functional alternatives to the automobile in urban and suburban areas.

C-5 Formulation and adoption of circulation design standards that:

- Are uniformly applied on a Countywide basis according to development type;
- Respond to public safety and health considerations, especially vehicle and pedestrian safety, emergency access, evacuation routes, and the existing noise environments of communities;
- Address all modes of transportation; and
- Will not result in substantial deterioration of air quality.

7.4.8 Policies

C-a Shasta County and the Cities of Anderson and Redding, with the participation of the Department of Transportation, shall jointly coordinate planning within the urban and suburban areas of SCR in order to develop a consistent land use pattern and a circulation system adequate to meet the short and long-term needs. The Shasta County Regional Transportation Planning Agency shall be used as the principal agency for interjurisdictional circulation planning. The resulting circulation system shall be reflected in the general plans of each jurisdiction and in the Regional Transportation Plan for Shasta County and the Shasta County Congestion Management Program.

C-b In order to adequately plan for the future circulation network regarding highways, roads, and streets, the General Plan shall use the following functional hierarchy and related policies in its circulation planning:

- PRINCIPAL ARTERIAL: Provides regional, statewide and national transportation connections. All principal arterials are under state jurisdiction and include local state highways ~~as~~ well as interstate

highways. Access from principal arterials to adjacent properties should be limited for safety and traffic efficiency. Right-of-way widths are to be determined by Caltrans.

- ARTERIAL: Provides connections between links in the highway network and connects major destinations with the highway network. Access from arterials to adjoining properties should be limited for safety and traffic efficiency. Curbside parking should be prohibited where feasible. For the purpose of Section 66484 of the Subdivision Map Act, an arterial shall be considered a major thoroughfare. Arterials shall be shown on Plan Maps.

- COLLECTOR: Accommodates traffic between principal arterials, arterial streets and/or activity centers. Direct access to individual residential lots should be limited where feasible to improve traffic safety and efficiency. For the purpose of Section 66484 of the Subdivision Map Act, a collector shall be considered a major thoroughfare. Collectors shall be shown on Plan Maps.

- SUBCOLLECTOR: Subcollectors serve between 300 and 700 potential residences. Direct access from adjoining parcels is permitted. Curbside parking is also permitted, but should be discouraged in planned developments for reason of safety, aesthetics, and energy conservation. Subcollectors are not shown on the Plan maps.

- MAJOR LOCAL STREET: Provides access from 50 to 300 potential residences. Major local streets provide direct access to individual adjoining properties. Major local streets are not shown on the Plan maps.

- LOCAL STREET: Provides access from 25 to 50 potential residences. Local streets provide direct access to individual adjoining properties. Local streets are not shown on the Plan maps.

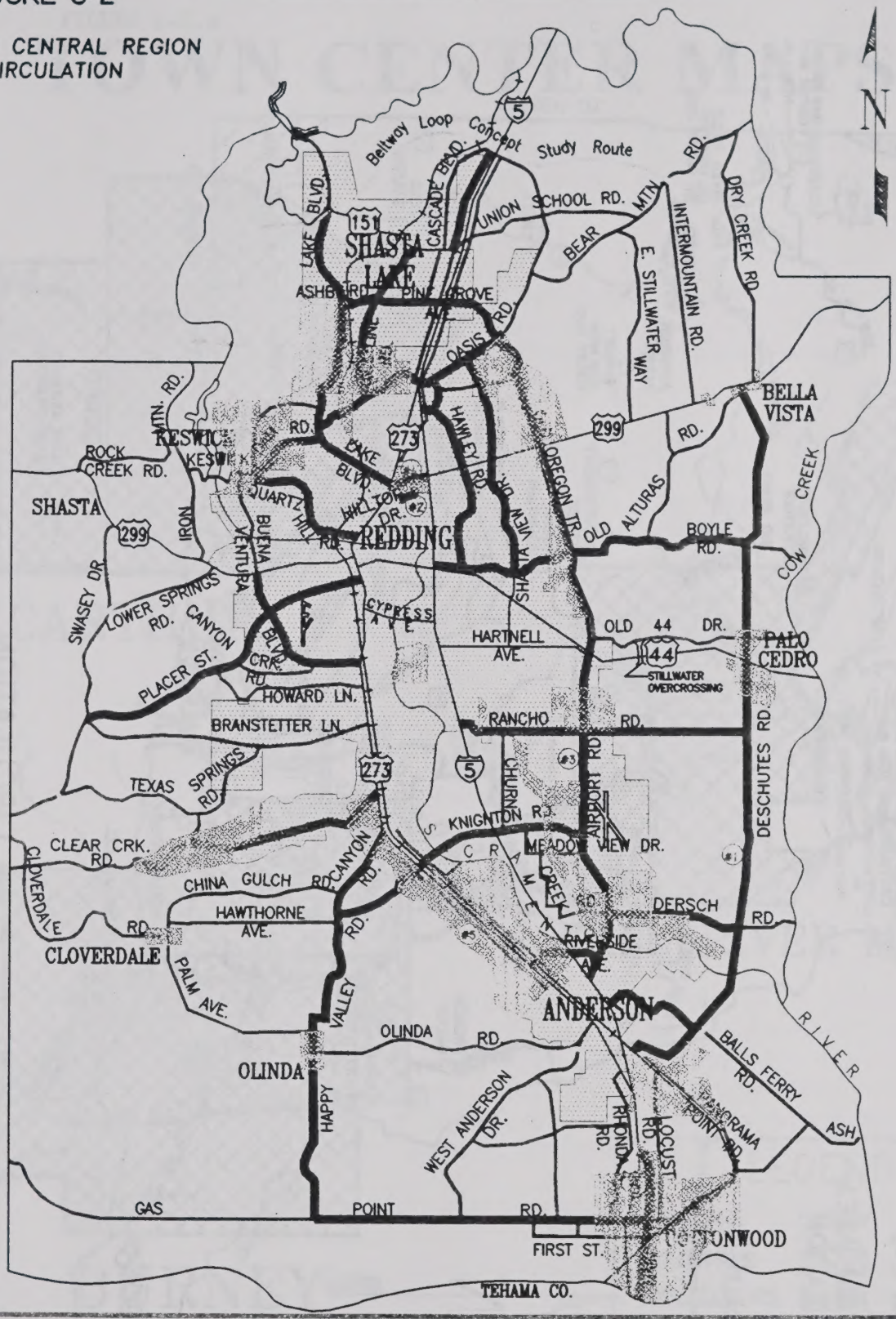
- MINOR LOCAL STREET: Provides access for up to 25 potential residences. Minor local streets are the only streets which may dead end in a cul-de-sac or court. Minor local streets are not shown on the Plan maps.

- MINOR STREETS: Other types of streets that carry very low volumes of traffic may also be utilized. These streets are not shown on the Plan maps.

Figures C-2 and C-3 identify the arterials and collectors. Arterials and collectors are further divided into urban and rural roads. Urban roads generally require more right-of-way per lane, more lanes, and full urban improvements such as curbs, gutters, and sidewalks. All projects shall be evaluated as to their conformance with this circulation network.

FIGURE C-2

SOUTH CENTRAL REGION CIRCULATION

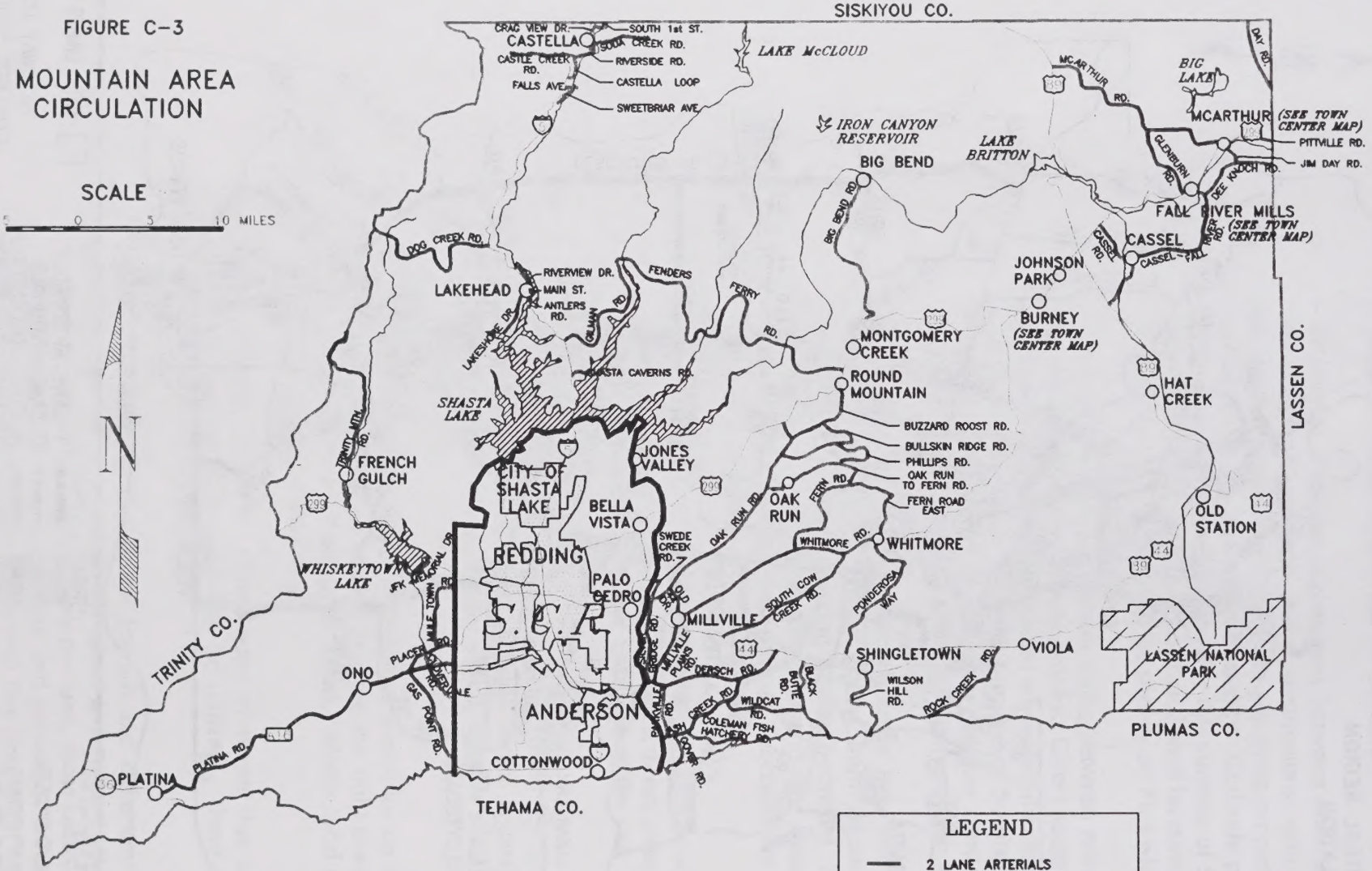


#1 – EXISTING 100' R/W TO REMAIN FROM BALLS FERRY RD. TO STATE HWY. 44.
#2 – 84' R/W FROM CITY OF REDDING TO LAKE BLVD. EAST.
#3 – 110' R/W EXPRESSWAY WITH FRONTAGE RD. FROM CITY OF ANDERSON TO CITY OF REDDING NEAR HWY. 44.
#4 – 110' R/W EXPRESSWAY WITH FRONTAGE RD. EAST OF HILLTOP DR.
#5 – 45' R/W WITH FRONTAGE RD. FROM CITY OF ANDERSON TO CLEAR CREEK RD.

URBAN
RURAL
4 LANE ARTERIALS
2 LANE ARTERIALS
4 LANE COLLECTORS
2 LANE COLLECTORS
CITY LIMITS (URBAN)
BELTWAY LOOP CONCEPT STUDY RTE.

FIGURE C-3

MOUNTAIN AREA CIRCULATION



LEGEND

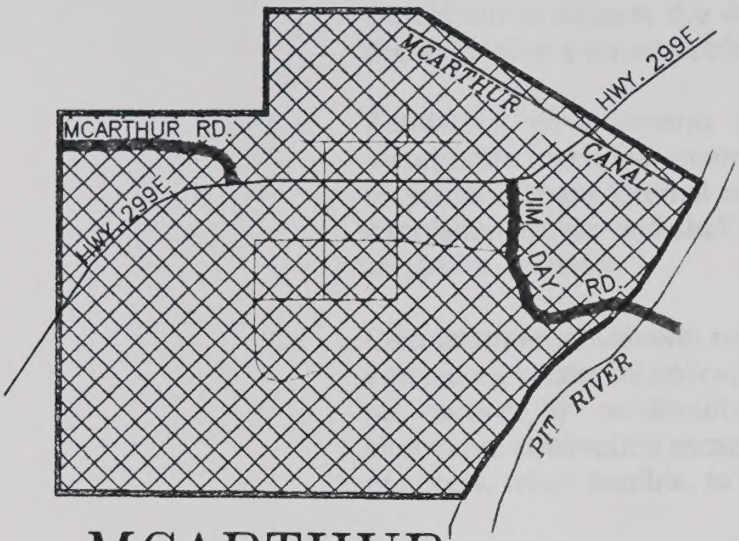
2 LANE ARTERIALS
2 LANE COLLECTORS

GENERAL PLAN CIRCULATION

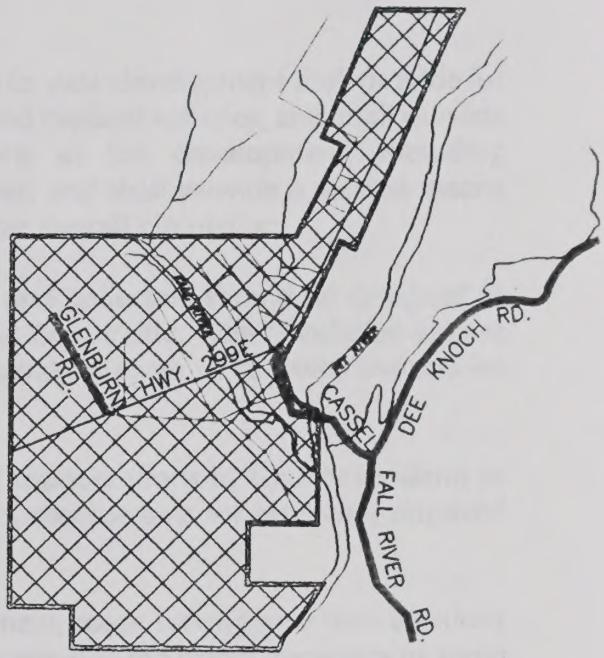
General Plan Revision Program: SHASTA COUNTY, CALIFORNIA

FIGURE C-3.a

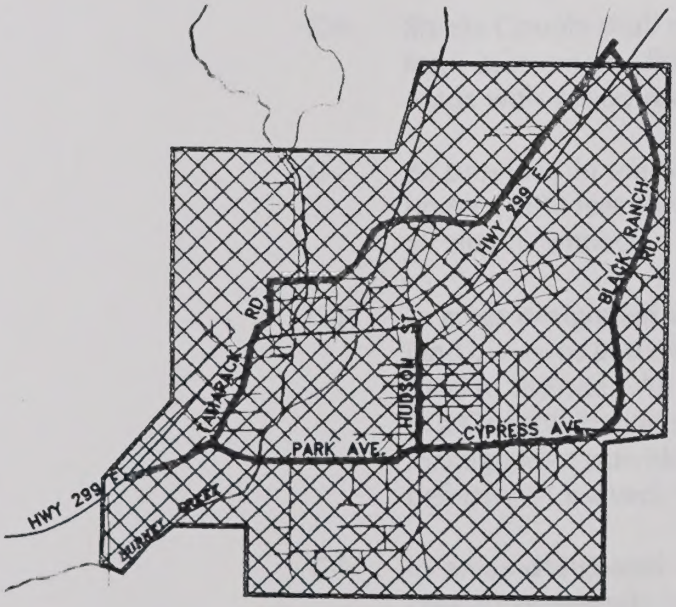
TOWN CENTER MAPS



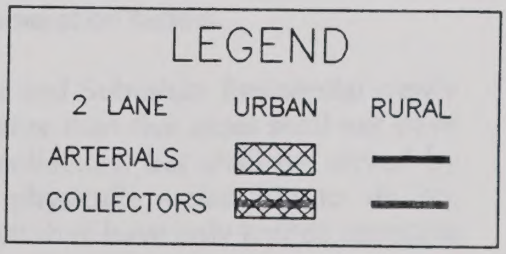
MCARTHUR



FALL RIVER MILLS



BURNEY



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C-c Existing accessibility to rail service in the SCR and Northeast Shasta Planning Areas shall be protected by the development pattern from preemption by incompatible land uses. Opportunities for increasing accessibility to existing rail service shall be preserved by the development pattern.

C-d Shasta County, in conjunction with the cities of Anderson and Redding, should strive towards the development of a land use pattern that will accommodate a future public transit system.

C-e Residential developments at urban and suburban densities should incorporate functional internal circulation networks for pedestrians and bicyclists. These internal networks shall be connected to the external circulation system and shall, to the extent feasible, link residential areas to service centers.

C-f Circulation improvements required for new development shall provide for emergency access by police, fire, and medical vehicles, and shall provide for escape by residents/occupants of the development, including alternative automobile escape routes; and shall provide a second means of access, when feasible, to improve overall circulation.

C-g Development adjacent to arterials and collectors should be designed to minimize the noise impact received from traffic. The circulation system shall also be designed with consideration given to its noise impacts on adjacent development.

C-h Shasta County shall encourage and support efforts by County residents to form assessment districts and other mechanisms for replacing unpaved roads with paved roads.

C-i As provided in the Air Quality Element, roads serving new land divisions under 1,000 feet elevation shall be paved to the extent necessary to avoid air quality impacts.

C-j In areas designated as Mixed Use (MU), Commercial (C), or Industrial (I) land divisions and discretionary uses shall ultimately be served by a paved road to the site. All other non-residential discretionary uses not located in a General Plan area described above, excepting agricultural and timber management activities, shall ultimately be served by a paved road, unless deferred or waived, based on traffic generation factors.

C-k In areas designated Urban Residential and Suburban Residential newly created one-family residential lots smaller than five acres shall not have direct access to arterials and major collectors, but shall be served by internal street systems unless it is physically unfeasible to do so. Commercial and industrial development shall have only limited access to arterials and major collectors.

C-l All proposed land divisions shall be legally accessible by a road.

C-m The County shall encourage the State Department of Transportation to widen State routes and improve intersections within said routes to accommodate traffic flow. These routes include Highway 299E to Bella Vista and Highway 44 east to Palo Cedro and others where necessary.

C-n Rural Residential A development along the north side of Route 299 between Fall River Mills and McArthur shall occur only within the area designated on the community plan map. Development shall be designed so that housing units utilize common collector roads located at intervals of no less than 1,000 feet.

TABLE C-1

CIRCULATION CLASSIFICATION OF COUNTY ROADS

Planning Area	Road Name	Classification
Sacramento Canyon	Antlers	Collector 60
	Castella Loop	Collector 60
	Castle Creek Road	Collector 60
	Crag View Drive	Collector 60
	Falls Avenue	Collector 60
	I-5	Principal Arterial
	Lakeshore Drive	Collector 60
	Loma Vista	Collector 60
	Main Street (Lakehead)	Collector 60
	Riverside Road	Collector 60
	Riverview Drive	Collector 60
	Soda Creek Road	Collector 60
	Sweetbriar Avenue	Collector 60
	0H007	Collector 60
Northwest Forest	Highway 299E	Principal Arterial
Big Bend	Big Bend Road	Collector 60
	Buzzard Roost Road	Collector 60
	Fenders Ferry Road	Collector 60
	Highway 299E	Principal Arterial
North East	Black Ranch Road to Cypress Avenue (proposed southerly extension of)	Collector 64
	Bridge Street	Collector 64
	Carson Street (proposed extension)	Collector 64
	Cassel Road	Collector 60
	Cassel-Fall River Road	Collector 60
	Cypress Avenue	Collector 64
	Day Road	Collector 60
	Dee Knock Road	Collector 60
	Glenburn Road	Collector 60
	Highway 89	Principal Arterial
	Highway 299E	Principal Arterial
	Hudson Street (from Cypress Avenue north)	Collector 64
	Jim Day Road	Collector 60
	McArthur Road	Collector 60
	Mountain View Road	Collector 60
	Park Avenue	Collector 64
	Pittville Road	Collector 60
	Superior Avenue, proposed (from Hudson Street to Black Ranch Road)	Collector 64
	Tamarack Avenue	Collector 64
	Tamarack Avenue (proposed northerly extension to the Carson Street extension)	Collector 64

Planning Area	Road Name	Classification
Lassen	Highway 44	Principal Arterial
	Highway 89	Principal Arterial
Eastern Forest	Bull Skin Ridge	Collector 60
	Fern Road East	Collector 60
	Highway 44	Principal Arterial
	Oak Run to Fern Road	Collector 60
	Phillips	Collector 60
	Ponderosa Way	Collector 60
	Rock Creek Road	Collector 60
	Wilson Hill Road	Collector 60
Eastern Upland	Ash Creek Road	Arterial 70
	Black Butte Road	Collector 60
	Bull Skin Ridge Road	Collector 60
	Buzzard Roost Road	Collector 60
	Coleman Fish Hatchery Road	Collector 60
	Dersch Road	Arterial 70
	Fern Road	Collector 60
	Gover Road	Collector 60
	Highway 44	Principal Arterial
	Highway 299E	Principal Arterial
	Millville Plains	Collector 60
	Oak Run Road	Collector 60
	Oak Run to Fern Road	Collector 60
	Old 44 Drive	Collector 60
	Parkville Road	Collector 60
	Ponderosa Way	Collector 60
	Silver Bridge Road	Collector 60
	South Cow Creek Road	Collector 60
	Swede Creek Road	Collector 60
	Whitmore Road	Collector 60
	Wild Cat Road	Collector 60
SCR	Airport Road (Hwy. 44 to Meadow View Dr)	Arterial 110
	Airport Road (Meadow View Dr. to North Street Bridge)	Arterial 120
	Arrowhead Road (from Beltline Road to Cascade Boulevard)	Collector 64
	Ashby Road	Collector 84
	Ash Creek Road	Arterial 70
	Balls FerryRoad (from First Street to Fourth Street)	Collector 64
	Balls Ferry Road (from Deschutes to City of Anderson)	Arterial 96
	Balls Ferry Road (remainder)	Arterial 70
	Bear Mountain Road (from Old Oregon Trail to Bernard Way)	Arterial 96

Planning Area	Road Name	Classification
	Bear Mountain Road (from Bernard Way to Silverthorne Road)	Arterial 70
	Beltline Road (proposed)	Collector 64
	Boyle Road	Collector 60
	Buena Ventura, proposed (from Keswick Dam Road southerly to Redding)	Arterial 96
	Buena Ventura, proposed (Westwood Avenue extension)	Collector 60
	Canyon Road	Collector 84
	Canyon Creek Road (proposed extention)	Collector 60
	Cascade Boulevard	Collector 64
	Charles Street (Gas Point to First)	Collector 60
	China Gulch Drive	Collector 60
	Churn Creek Road - City limits to Knighton Road	Collector 84
	Churn Creek Road (from Knighten Road to Airport Road)	Collector 60
	Clear Creek Road (from Honey Bee Road to Highway 273)	Arterial 96
	Clear Creek Road (Westerly)	Arterial 70
	Cloverdale Road	Collector 60
	Deer Creek Road	Collector 64
	Dersch (from Airport to Deschutes)	Arterial 96
	Dersch (from Deschutes Easterly)	Arterial 70
	Deschutes	Arterial 96
	Dry Creek Road	Arterial 70
	East Stillwater - Bernard Way	Collector 60
	First Street (Cottonwood)	Collector 64
	Fourth Street	Arterial 70
	Gas Point Road (northbound ramps I-5 to Happy Vally Road)	Arterial 96
	Gas Point Road (Happy Valley Road to Platina Road)	Arterial 70
	Gold Hill Drive (from Holly Road to Old Oregon Trail)	Collector 64
	Happy Valley Road (from Gas Point Road to Canyon Road)	Collector 84
	Happy Valley Road (from Canyon Road to Highway 273)	Collector 64
	Hawthorne Avenue	Collector 60
	Hawley Road	Collector 84
	Hilltop Drive	Arterial 96
	Honey Bee Road	Arterial 70
	Howard Lane (proposed extension)	Collector 60
	Intermountain Road	Collector 60
	Iron Mountain Road	Collector 60
	Keswick Dam Road (from Quartz Hill Road westerly)	Arterial 96

Planning Area	Road Name	Classification
	Keswick Dam Road (from Quartz Hill Road easterly)	Arterial 96
	Knighten Road	Arterial 96
	Lake Boulevard (from Route 151 to Redding)	Arterial 96
	Lake Boulevard (from Route 151 northerly)	Arterial 70
	Lake Boulevard east	Arterial 96
	Locust Road	Collector 64
	Lower Springs Road	Collector 60
	Main Street (Cottonwood)	Arterial 96
	Meadow View Drive	Collector 60
	Mussel Shoals Avenue	Collector 64
	North/South Street (proposed connecting First Street and Gas Point Road midway between Charles and I-5)	Collector 64
	Oak Street	Collector 60
	Oasis Road (I-5 to Old Oregon Trail)	Arterial 96
	Oasis Road (Lake Boulevard to I-5)	Collector 84
	Old Alturas Road (from Redding to Boyle Road)	Arterial 96
	Old Alturas Road (from Boyle Road to Deschutes)	Arterial 70
	Old Alturas (extension to 299E)	Collector 60
	Old 44 Drive	Collector 60
	Old Oregon Trail (from Highway 44 to North College entrance)	Arterial 110
	Old Oregon Trail (from North College entrance to Bear Mountain Road)	Arterial 96
	Old Oregon Trail 9 from Bear Mountain Road to I-5)	Arterial 70
	Olinda Road	Arterial 70
	Ox Yoke Road	Collector 84
	Palm Avenue	Collector 60
	Panorama Point Road	Collector 60
	Pine Grove Avenue (proposed)	Collector 84
	Placer Road (from Texas Springs Road to Redding City limits	Arterial 96
	Placer Road (westerly)	Arterial 70
	Quartz Hill Road (from Keswick Dam Road northerly)	Collector 60
	Quartz Hill Road (from Keswick Dam Road southerly)	Arterial 96
	Rancho Road (from Airport Road to Redding)	Arterial 96
	Rancho Road	Arterial 70
	Rhonda Road	Collector 60
	Riverside Avenue	Collector 60
	Rock Creek Road	Collector 60
	Shasta View (extension)	Collector 84

Planning Area	Road Name	Classification
	Shasta View Drive (from Old Alturas to Highway 299E)	Collector 84
	Shasta View Drive (from Highway 299E to Oasis Road)	Collector 64
	Swasey Drive	Collector 60
	Swede Creek Road	Collector 60
	Texas Spring Road (from Honey Bee Road to Branstetter Lane)	Arterial 70
	Texas Springs Road (from Honey Bee Road to Placer Road)	Collector 60
	Twin View Boulevard	Collector 84
	Union School Road	Collector 60
	Union School Road (proposed extension from Old Oregon Trail to Bear Mtn. Rd.)	Collector 60
	West Anderson Drive	Collector 60
	Unnamed Road (between West Anderson Dr. and Rhonda Road)	Collector 60
	Unnamed Road (between West Anderson Dr. and Gas Point Road)	Collector 60
	Unnamed Road (proposed between Twin View Boulevard and Holly Road)	Collector 64
	Interstate 5	Principal Arterial
	Highway 44	Principal Arterial
	Highway 151	Principal Arterial
	Highway 273	Principal Arterial
	Highway 299E	Principal Arterial
	Highway 299W	Principal Arterial
Western Upland	Clear Creek Road	Arterial 70
	Cloverdale Road	Collector 60
	Gas Point Road	Arterial 70
	Highway 36	Principal Arterial
	Placer Road	Arterial 70
	Platina Road	Arterial 70
French Gulch	Highway 299W	Principal Arterial
	JFK Memorial Drive	Collector 60
	Trinity Mountain Road	Collector 60

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7.5 PUBLIC FACILITIES

7.5.1 Introduction

This element addresses those public facilities not discussed elsewhere in the Plan but that have a bearing on land use matters. This includes water supply, wastewater treatment, solid waste disposal, community recreation and schools. Fire and sheriff protection are discussed in a separate element in the Public Safety section since they are concerned with public safety. Circulation is also treated as a separate element due to the complexity of that topic.

Water supply, wastewater treatment and solid waste disposal are essential services required by all types and densities of development. Section 65302(d) of the Government Code requires preparation of an element for the conservation, development, and utilization of natural resources including water. This element must be developed in coordination with the Countywide water agency and with all district and city agencies which have developed, served, controlled, or conserved water for any purpose. Under authority of Section 65303, a local government may prepare an element showing a general plan for sewerage disposal. Finally, Section 65302(a) requires the designation of lands used for solid waste disposal facilities.

Community recreation and schools are public services which play major roles in determining the quality of life available in a community. Authority for these topics is provided by Government Code Section 65303.

Findings

7.5.2 Nature of the Water Supply/Wastewater Treatment

Water supply and wastewater treatment are concerned with the removal of water from its natural environment and its return to this environment after it has been used by man for a variety of purposes. The apparent simplicity of this mechanism is offset by the complexity of the natural resource base, particularly in two areas. Documentation of the ability of surface waters to supply water and to dispose of wastewater is a relatively straightforward process. Much greater difficulty is posed in attempting to document groundwater supply resources and the ability of soils to receive and treat wastewater. Since the surface water resources of Shasta County are geographically limited, the latter questions are very significant to the future development pattern, yet they are the most difficult to answer.

The Background Reports to the General Plan contain a comprehensive examination of the water and wastewater resources of Shasta County and their implications for future development. This study is based on the latest published literature and extensive communications with local authorities in these areas. Understanding the water supply and wastewater treatment opportunities and constraints operating in Shasta County is fundamental to understanding its future development potential. Major findings of this study are outlined below.

7.5.3 Water Supply

There are two sources of water supplies, surface waters and groundwaters, and two general methods of delivering water supplies, community systems and individual or on-site systems. Each type of delivery system may use either surface or groundwater as its supply source. The ground and surface water resources are not uniformly distributed throughout the County, and in different areas of the County different delivery systems have developed over time.

The California Department of Water Resources has identified two significant groundwater basins in Shasta County. One is located in the Sacramento River Valley and is named the Redding Groundwater Basin. The other is located in the Fall River Valley and carries its name. Although the firm, or reliable water yield from these two groundwater basins in unknown, the storage capacity of the 510 square mile Redding Basin is estimated to contain approximately 5.5 million acre feet of groundwater and the 120 square mile Fall River Valley Basin is estimated to contain approximately one million acre feet of storage. (1)(2) While recognizing that only a small fraction of this groundwater can be used under safe yield management, the total groundwater storage volume of these two basins is comparable to Shasta Lake's maximum storage of 4.5 million acre feet.

The majority of the water supply in Shasta County comes from surface flows. In contrast to groundwater, surface waters are subject to a complex state legal system establishing the rights of individuals and other entities to these flows. The primary surface water resources in Shasta County are impounded within the Lake Shasta and Whiskeytown Reservoirs. Rights to these impounded waters are allocated under the jurisdictions of the federally owned and managed Central Valley Project (CVP). Table PF-1 shows the allocation of CVP water in Shasta County. Some recipients of this water in turn sell a portion of their allocation to other agencies. Rights to other major surface water resources of the County have been similarly allocated to different individuals and entities. Pacific Gas and Electric is a major controller of water rights, which it uses for power generation purposes.

Careful review of Table PF-1 raises issues with important implication for future development in the SCR planning area. First, the substantial allocation of base water supply of the Anderson-Cottonwood Irrigation District must be noted. Although presently most of its allocation is used for irrigation, the use of this water for non-agricultural purposes represents a tremendous potential which must be kept in mind. Second, with the exceptions of the Cities of Anderson and Redding and Shasta County, none of the other water controlling entities are responsible for land use planning, yet decisions they make regarding the provision of water service have significant land use implications. Under their enabling authority, these decisions must primarily consider their financial implications for the customers served by the various contracting entities, and secondary consideration is given to their Countywide land use implications. Decisions made in the best interests of the customers of the CVP water contracting entity are not always in the best interests of Countywide land use planning.

TABLE PF-1

ALLOCATION OF CVP WATER IN SHASTA COUNTY

	Contracting Entity	Water Allocation (AF) Base Supply[1]	Project Water[2]	Total
1.	Anderson Cottonwood ID	165,000	10,000	175,000
2.	Bella Vista WD	0	24,000	24,000
3.	Clear Creek CSD	0	15,300	15,300
4.	Daniell (Private Party)	13	7	20
5.	Keswick CSD	0	500	500
6.	Mountain Gate CSD	0	350	350
7.	City of Redding	17,850	3,150	21,000
8.	City of Redding (Buckeye Area)	0	6,140	6,140
9.	Riverview Golf Course (Private)	255	25	280
10.	Shasta CSD	0	1,000	1,000
11.	Shasta Co. Water Agency	0	5,000	5,000
12.	Shasta Dam Area PUD	0	3,225[3]	3,225
13.	Summit City PUD (Now SDAPUD)	0	1,169[3]	1,169
14.	Tharalson/Michiels (Private Party)	70	135	205
15.	U.S. Forest Service (Centimudi Boat Ramp)	0	10	10
	Totals	183,188	70,011	253,199

[1] Base Supply is a local water right which existed prior to construction of the CVP and which is protected in CVP contracts. There is no charge for this water.

[2] Project Water is water made available as a result of the CVP. This water is purchased from the Bureau of Reclamation.

[3] Subject to annual renegotiation.

Source: Shasta County Water Agency

These full CVP allocations represent a significant resource to all residents of Shasta County. The central planning issue raised by the present pattern of allocation of CVP water in the SCR planning area is the need for coordination of land use planning with the supply of water. Currently each contracting entity is legitimately pursuing its own best interests, generally without regard for their larger land use implications. This situation demonstrates the need for one agency with overall responsibility for coordinating water supply planning within land use and related planning with the SCR planning area.

The issue of surface water allocations, particularly that from the CVP, has become increasingly important in Shasta County as the population increases and water demands of contracting districts also increase. The extended drought of the late 1980's and early 1990's has renewed focus on the importance of reliable water supplies and the effect on land use planning. During drought years when the CVP surface allocations have been limited, a number of individual water district contractors have relied on negotiations that allow temporary changes or transfers in annual allocations so as to assure that minimal domestic needs are met. Also, some CVP dependent districts, such as the Bella Vista Water District and the Clear Creek Community Services District, have begun well drilling programs which will rely more on local groundwater in the future.

However, there have been no long range water planning efforts which seek to address such issues as consolidated water management, the role of water and land use planning or the development of new long-term safe yield water supplies on a subregional or SCR basis. In the past, there has been discussion of providing overall water planning by the Shasta County Water Agency. Other solutions may include water purveyors entering into joint powers agreements that promote more efficient water management and planning of this resource in the County.

Beyond the institutional issues outlined above, the availability of ground and surface water resources and delivery systems have major implications for the density/ intensity of land use for development purposes. The water supply conditions are generally mapped in Figure 11 of the water and wastewater study (see General Plan Background Reports, Appendix D). The major findings expressed is that the valley areas of the SCR and Northeast Shasta planning areas present the least constraints on future development with respect to the availability of water, while the other planning areas of the County are constrained in varying degrees. These findings are generally mirrored by those pertinent to wastewater treatment.

A complete understanding of groundwater resources of Shasta County is not available and existing information is limited. As mentioned above, little to no information is available regarding the safe yield of the County's two largest groundwater basins. In 1982, the Department of Water Resources issued the "Northeast Counties Groundwater Update" for the Northeast portion of Shasta County. A study for the Eastern Upland portion of the County by the Department of Water Resources and Shasta County Water Agency was published in June, 1984. As financial resources permit, the County should fund studies designed to improve the understanding of groundwater in Shasta County. Opportunities to obtain additional state and federal assistance in this area should be pursued.

One major opportunity which should be utilized is the development of a program for monitoring of wells in certain areas of the County where groundwater quantities are unknown or the quality is either not certain or substandard. This would ensure that new development will not jeopardize existing wells and will be able to meet its own long-term needs. To be useful, well monitoring must be conducted over long periods of time. Data collected when a well is initially drilled is valuable, but it provides no information regarding the well's long-term performance and impact on surrounding wells.

There are several areas in the County where groundwater quantity and/or quality may be of concern. The 1984 DWR study of the Eastern Upland area showed potential groundwater limitations in the Inwood and Whitmore areas, as well as in the vicinity of Salt Creek east of Bella Vista and a much more extensive area located generally north of State Highway 299 in the Eastern Upland planning area. In the Salt Creek area, very limited groundwater is found to be generally saline, connate water. DWR's 1975 groundwater bulletin and the USGS's 1983 report both noted that certain shallow groundwaters in the northern half of the Redding Basin are sometimes saline, containing sodium and boron. This characteristic is most true near the northern fringes of the Basin. The USGS report observed that there was the possibility to induce saline water upward in the Basin if pumping of the main water producing formations was increased. (3) In the extreme eastern portions of the Fall River Valley, elevated nitrate levels have been found in shallow wells, some of which exceed state drinking water standards. The County is working with local residents to find alternative domestic sources in this area. Because of the lack of water supply studies in most other rural areas of Shasta County, other areas may exist which do not contain adequate local water supplies to accommodate the population densities which are indicated on the land use maps.

7.5.4 Wastewater Treatment

Wastewater may be treated and returned to the natural environment using one of several technical methods with either community or individual on-site disposal systems. The various combinations of technical methods and service systems and their pattern of use throughout the County is discussed below.

On-site Disposal Systems

The simplest system is the individual on-site septic tank and leach field serving a single dwelling. The advantage of this on-site wastewater treatment system is its relatively low cost and its water recharge characteristics. Disadvantages relate to the narrow requirements of this system with respect to soil characteristics, topography, and the absence of seasonal or year-round high groundwater levels. Failure of a septic tank system is its major disadvantage because it may result in contamination of groundwater or other health related problems. Unless this failure is evidenced by odor, visual or mechanical symptoms, it may go undetected indefinitely. With few exceptions these requirements severely limit their use in Shasta County in that it cannot be assumed that every lot in the County of any size will be able to support an on-site septic tank and leach field system. Generally, those areas of the County with the least constraints on the use of this system are located in the Sacramento Valley area ~~and~~ are most easily

served by community sewer systems. Determining individual on-site sewage disposal suitability requires site by site investigation. In areas of seasonal high groundwater, the County's on-site sewage disposal rules require that wet weather testing, or its mathematical equivalent, show that necessary suitability exists during "normal" rainy season conditions to allow safe operation of septic systems.

Where opportunities to use conventional septic tank and leach field systems are limited, there may be interest in alternative or nonconventional on-site systems, including mound and aerobic systems. The use of nonconventional systems occurs most frequently where shallow groundwater or slow percolation rates are observed, and where alternative designs can assure maintaining public health and safety standards. Overall, the utilization of mound and aerobic systems has been very limited in Shasta County due to uncertain performance and difficulty in maintenance.

On-site wastewater capability is, like the availability of domestic water and sewer systems, an important part of the equation to determining the land capability and desirable development density in a given area. The septic suitability of various soil types in Shasta County varies tremendously due to varied terrain, precipitation and other geographic factors. As a result, there is need to better correlate septic density as a component to the County's land capability analysis system which is discussed in the Community Development Element. For example, mapping of areas which exhibit seasonal high groundwater characteristics or areas with high rates of septic failure would provide important information in a land capability analysis and hopefully, the beginning of a better understanding of potential cumulative impacts of long-term use of septic systems in areas with the potential for water quality problems.

Community Wastewater Disposal

The remaining wastewater treatment systems require some form of community collection, treatment, and disposal. The most common form of community system is the treatment plant which discharges treated effluent to a storage and irrigation system (land disposal) or in diluted form to a surface water course. Presently, the Shasta Dam Area Public Utility District is permitted to seasonally discharge treated and diluted wastewater to a surface water, namely Churn Creek. A major goal of the District's capital improvement plans has been to significantly reduce or cease the need for any Churn Creek discharge as soon as practically possible. (4) Both the Cities of Anderson and Redding discharge treated sewage (advance secondary treatment) year long to the Sacramento River. The Central Valley Regional Water Quality Control Board's Sacramento Basin Plan discourages any new plans to dispose of treated wastewater to surface waters.

As with the availability of water for domestic use, the availability of wastewater treatment facilities has a major role for determining the density and intensity of land use for development purposes. Wastewater treatment conditions are generally mapped in Figure 22 of the background study. The major implication to land use planning is that the SCR and North East Shasta planning areas present the least constraints on future development with respect to wastewater treatment. The other planning areas are much more constrained by the general unavailability of community systems and limitations on the use of on-site systems.

A review of wastewater treatment systems in the SCR planning area also raises issues concerning the coordination of land use planning with the provision of water and sewer services. In SCR, there are three major community wastewater systems, the Cities of Anderson and Redding and the Shasta Dam Area Public Utilities District. Cottonwood and Palo Cedro will also soon have community wastewater systems which are operated through county service areas. The communities of Burney and Fall River Mills are also served by centralized wastewater treatment facilities. The dry flow treatment capacities of these wastewater treatment facilities is shown in Table PF-2, below.

TABLE PF-2

Wastewater Treatment Facilities

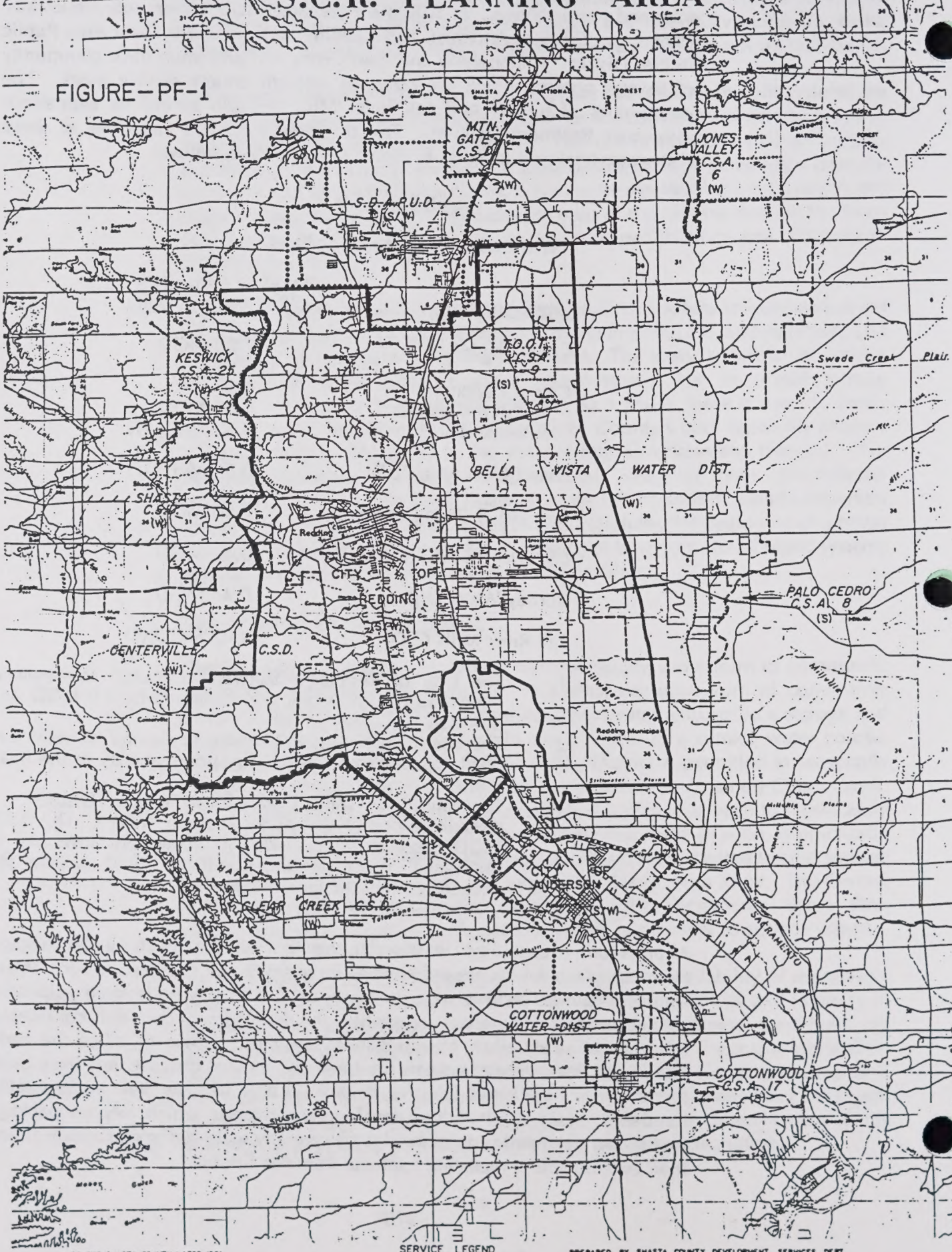
City/Community	Dry Flow Capacity in Million Gallons Daily
City of Anderson	2.00 MGD
City of Redding	
Redding Regional	8.80 MGD
Stillwater Facility	4.50 MGD (1)
Shasta Dam Area PUD	0.64 MGD (2)
CSA No. 8 (Palo Cedro)	0.06 MGD
CSA No. 17 (Cottonwood)	0.43 MGD
Burney Water District	0.44 MGD
Fall River Mills CSD	0.07 MGD (3)

1. The City of Redding's Stillwater Regional Wastewater Treatment Facility is ultimately planned for 8.0 MGD dry flow capacity.
2. The Shasta Dam Area PUD plans to expand its treatment plant capacity to 1.3 MGD dry flow capacity in the near future.
3. The Fall River Mills Community Services District operates a primary evaporation pond system. The 0.07 MGD figure represents existing average dry flows and is not based on the ponding capacity. Pond capacity far exceeds current demand.

Another form of centralized wastewater treatment relies on much smaller package treatment plants which are designed to serve small and localized needs. These package treatment facilities have been proposed in the past for isolated residential subdivision and commercial areas where the development density is considered too great to safely allow on-site disposal systems. However, since the early 1980's, no new package systems has been constructed because they have been found not to be (1) cost effective, and/or (2) able to meet state water quality standards. As a result, future development projects which rely on package wastewater treatment systems need to be carefully reviewed to reasonably assure their success before receiving approval from the County.

SPHERES OF INFLUENCE FOR MAJOR WATER AND SEWER SERVICE IN THE S.C.R. PLANNING AREA

FIGURE—PF-1



SOURCE: SHASTA COUNTY LAFCO 1991

SERVICE LEGEND
(S)—SEWER
(W)—WATER

PREPARED BY SHASTA COUNTY DEVELOPMENT SERVICES DEPT. PLANNING DIVISION KK 12/91

7.5.5 Solid Waste Disposal

The California Integrated Waste Management Act of 1989 initiated a new planning process that replaced the existing County Solid Waste Management Plan. The County and its cities are now required to prepare and maintain a Source Reduction and Recycling Element and, by 1994, an Integrated Waste Management Plan, which includes a siting element. A key goal of the Integrated Waste Management Plan will be to assure maintenance of at least a 15 year capacity for solid wastes that are generated in the County and cannot be reduced or recycled. The 1994 deadline, as opposed to an earlier timetable, is based on the County's ample capacity in its existing solid waste landfills. Both of these plans address solid waste issues on a Countywide basis and must be approved by the California Integrated Waste Management Board.

The County and cities adopted a Source Reduction and Recycling Element in 1991 which addresses the County's waste generation characteristics, source reduction, recycling, composting, disposal capacity, education and public information, funding and integration of solid waste management issues. The County also adopted a Household Hazardous Waste Element which acts to supplement and support the Source Reduction and Recycling Element.

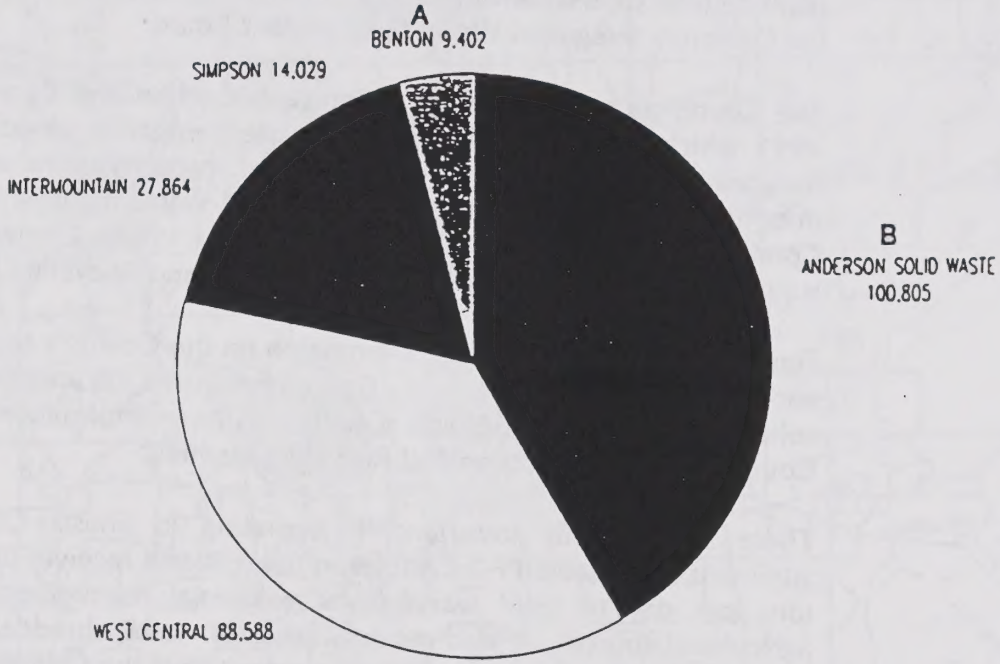
Figures PF-2 and PF-3 provide information on the County's solid waste disposal and waste stream characteristics. Figure PF-4 shows the approximate location of solid waste facilities in Shasta County. Further information is found in the County's Source Reduction and Recycling Element.

There are currently four landfills operating in Shasta County which are summarized in Table PF-2. Anderson Solid Waste receives approximately 600 tons per day of solid waste from residential, commercial, industrial and agricultural sources. It also receives asbestos waste, shredder waste and other hazardous wastes that have received a permit from the California Environmental Protection Agency. (5)

The Intermountain Landfill receives approximately 30 tons per day of municipal waste in addition to 54 tons per day of wood ash. The Simpson Landfill receives approximately 50 tons per day of residual sludges from the paper manufacturing process. The West Central Landfill receives approximately 325 tons per day of non-hazardous waste from residential, commercial, industrial and agricultural sources.

New solid waste facilities may be conditionally permitted according to the zoning plan if the site is first found to be favorably based on environmental and social constraints. This plan provides for new solid waste facilities to be conditionally permitted in all areas of the County as the need occurs. This requires the site to be compatible with adjacent land uses. Once the solid waste facility is approved, new land uses in the surrounding area must be regulated to avoid incompatibility with the solid waste facility.

The General Plan also sets up a procedure to be updated every five years and will include updating Figure PF-4 to identify all new solid waste facilities.



NOTE:

A BENTON LANDFILL CEASED OPERATION IN APRIL,1990.

B ANDERSON SOLID WASTE IMPORTED AN ADDITIONAL 24,145 TONS IN 1990.

FIGURE PF-2

1990 DISPOSAL TONNAGE BY LANDFILL

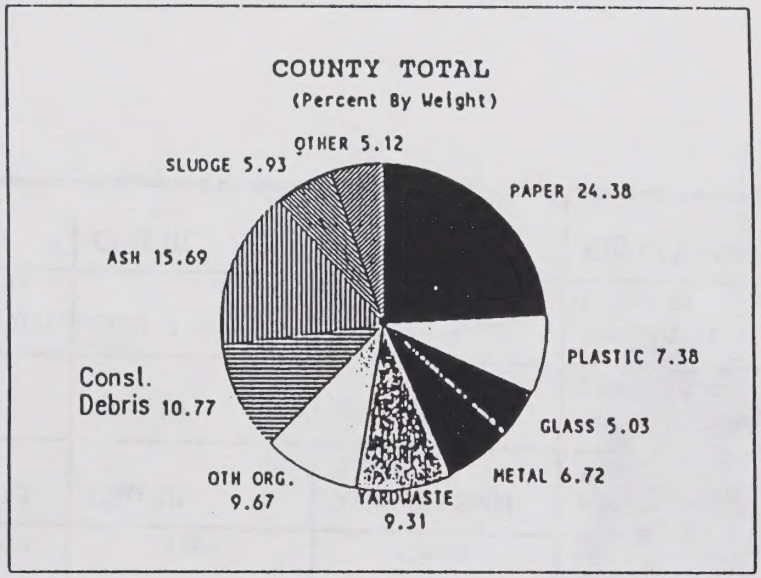
SOURCE REDUCTION AND RECYCLING ELEMENT
SHASTA COUNTY, CALIFORNIA

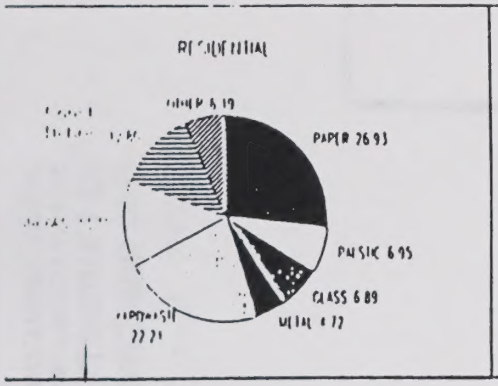
RDD 26788.A8.10 JUNE 1991

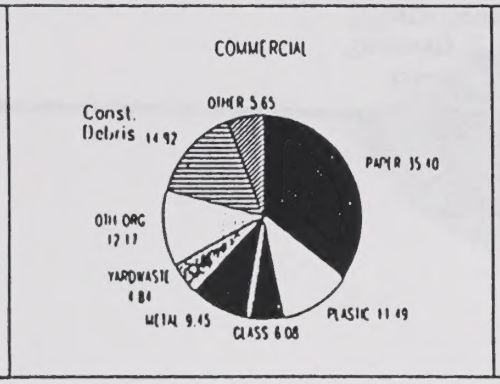
CH2M HILL

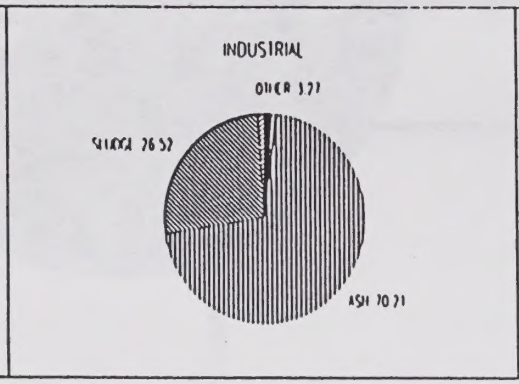
TABLE PF-3
Summary of Landfills
Shasta County, 1990

Landfill Name	Type	Owner	Operator	Size (acres)
Anderson Solid Waste	Class III	Anderson Solid Waste, Inc.	Anderson Solid Waste, Inc.	270
Intermountain Landfill	Class III	Intermountain Landfill, Inc.	Intermountain Landfill, Inc.	164
Simpson Landfill (Twin Bridges)	Class II	Simpson Paper Company	Simpson Paper Company	26
West Central Landfill	Class III	Shasta County	City of Redding	1,058









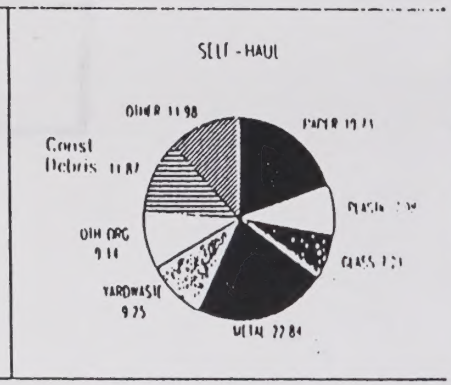


FIGURE PF-3

1990 WASTE STREAM COMPOSITION

SOURCE REDUCTION AND RECYCLING ELEMENT
SHASTA COUNTY, CALIFORNIA

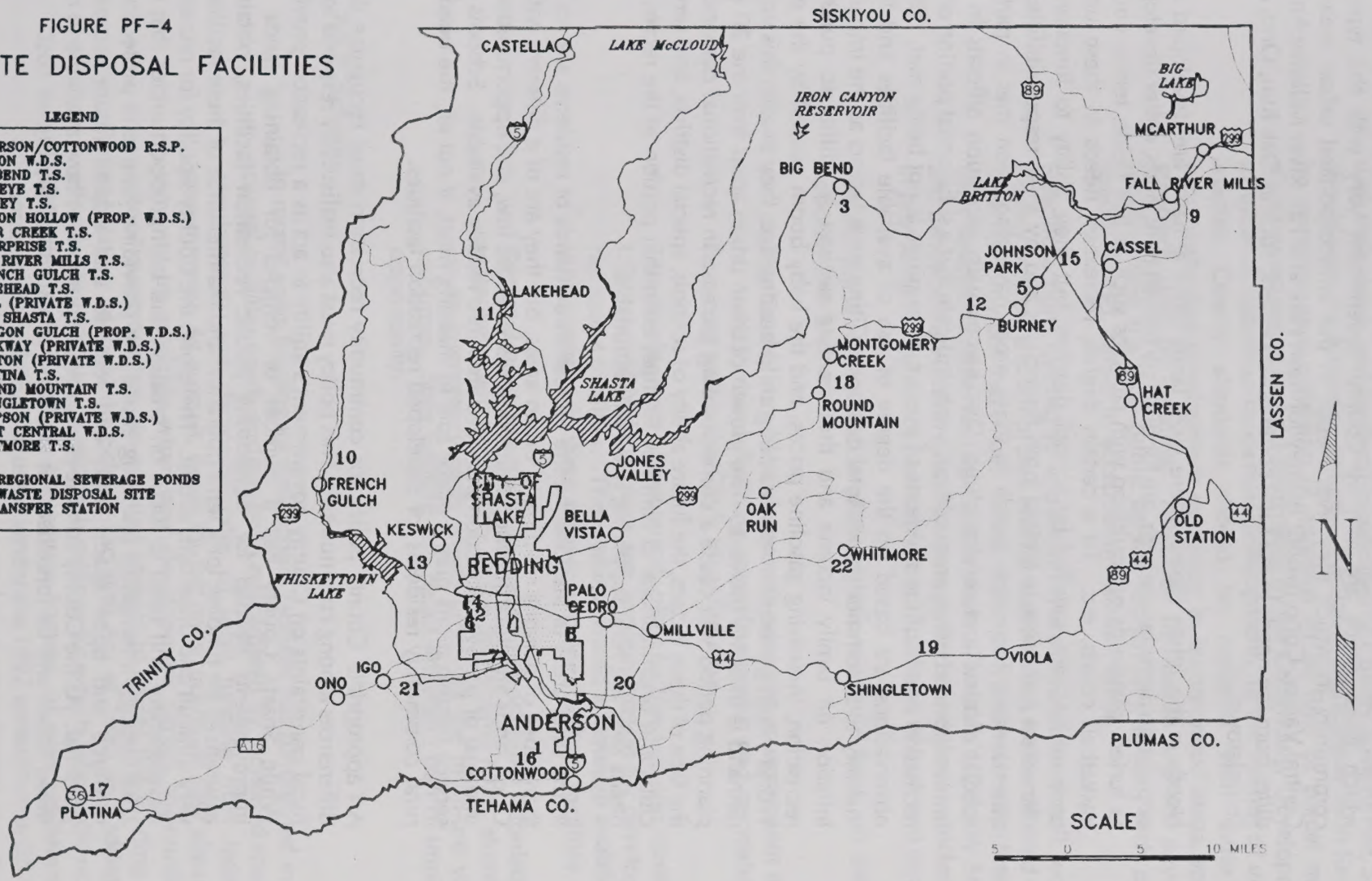
FIGURE PF-4

WASTE DISPOSAL FACILITIES

LEGEND

1 ANDERSON/COTTONWOOD R.S.P.
2 BENTON W.D.S.
3 BIG BEND T.S.
4 BUCKEYE T.S.
5 BURNEY T.S.
6 CANYON HOLLOW (PROP. W.D.S.)
7 CLEAR CREEK T.S.
8 ENTERPRISE T.S.
9 FALL RIVER MILLS T.S.
10 FRENCH GULCH T.S.
11 LAKEHEAD T.S.
12 MILL (PRIVATE W.D.S.)
13 OLD SHASTA T.S.
14 OREGON GULCH (PROP. W.D.S.)
15 PACKWAY (PRIVATE W.D.S.)
16 PAYTON (PRIVATE W.D.S.)
17 PLATINA T.S.
18 ROUND MOUNTAIN T.S.
19 SHINGLETOWN T.S.
20 SIMPSON (PRIVATE W.D.S.)
21 WEST CENTRAL W.D.S.
22 WHITMORE T.S.

R.S.P.-REGIONAL SEWERAGE PONDS
W.D.S.-WASTE DISPOSAL SITE
T.S.-TRANSFER STATION



General Plan Revision Program: SHASTA COUNTY, CALIFORNIA

7.5.6 Community Recreation

The community recreation needs of Shasta County residents and the degree to which these needs are met by County government vary with the type of community in which they live. Needs in the unincorporated urban areas of Central Valley, Cottonwood, Burney/Johnson Park and Fall River Mills/McArthur differ from the needs in the rural community centers, such as Oak Run, Ono, and Shingletown.

Needs in the urban areas, where most lands close at hand are developed and population densities are high, are for publicly owned park lands, either developed as turfed playfields or equipped with facilities such as ball fields, tennis courts, basketball courts, etc. To a certain degree, recreation needs in these urban communities are satisfied by school districts, but their ability to function as recreation providers is limited both financially and by their responsibilities in other areas. Recreation needs in these areas have also been met in part by special districts and service clubs. Discussions with recreation officials in the unincorporated urban areas of the County indicate that a substantial portion of the recreation needs of the residents of these communities is not being met. These observations are based on the degree of use of available facilities and their inability to accommodate the total demand. Citing such factors as the impact of inflation on family income and the resulting decline in ability to purchase recreation, increasing gasoline prices, and the baby boom caused by the post-World War II generation now reaching child-bearing age, they predict this unmet demand is likely to increase. The growth of these urban areas over the 20 year planning period will cause a corresponding increase in recreational demand. In the face of these factors, the future ability of schools, special districts, and service clubs and organizations to continue to meet even that portion of the recreation needs they are now supplying is very questionable.

In the rural areas of the County, the recreation demands of residents are no less than those of persons residing in urban areas, but they are of a different nature. Open lands are close at hand, population densities are low, and opportunities for informal or passive recreation activities are more readily available. Schools and service organizations play a major role in meeting most, if not all, the needs of rural community residents for developed recreation facilities.

An appropriate County policy for community recreation must recognize these differences among communities. This policy must also realistically respond to the fiscal constraints on County government's ability to act as a recreation provider. While Shasta County has a number of vehicles for obtaining lands and improvements needed for developing public recreation facilities, obtaining assurances for funding long term operation and maintenance of these facilities is very difficult and uncertain, at best. Therefore, the County's policy for recreation development will need to focus on creating and taking opportunities that may arise through interagency planning efforts and providing long-term protection of resource and open space lands and features that exhibit future recreation potential. As the County continues to grow, opportunities now available to meet these needs will be foreclosed or available at a substantially higher cost.

In order to adequately provide for the existing and future community recreation needs of its residents living in unincorporated urban areas in a manner consistent with their needs and the fiscal capabilities of County government, Shasta County should take the following strategy. Parklands dedications or in lieu fees should be required as a condition of approval of all final or parcel maps for land divisions occurring in areas designated by the Community Development Element as urban or suburban residential development. In the interest of uniformity, the existing County standards should be replaced with those applied to urban/suburban development occurring in incorporated areas, specifically the standards used by Redding. Parklands dedication and fee payment will be required only if a local public agency recreation provider, such as a school or special district, agrees to accept and maintain them.

Specific actions needed to implement the above strategy will require that the County prepare and adopt park and recreation plans for the affected communities. State law provides that in lieu fees or other park and recreation fees be based on fairly detailed facilities and operations plans. The state's Quimby Act, Street Light and Landscaping Act and specific plan regulations are three vehicles that can help in providing the guidance necessary for preparation of park and recreation plans.

Specific parks and recreation planning efforts should focus on the following as opportunities may arise:

- The County should work towards adopting an agreement with the Cities of Anderson and Redding regarding parks and recreation plans and financing within the City's planning area.
- The development of community plans for town centers identified in Policy CO-r should include plans and implementation for developing park and recreation facilities. These plans should encourage enabling of existing local agencies in these areas to provide for these facilities.
- Regional open space and recreation opportunities afforded by the area's waterways, and particularly by the Sacramento River, should be planned on an interagency basis which promotes the multi-use values of these resources. State funding will be an important part of implementing this opportunity.

7.5.7 Schools

In recent years funding for new school facilities has diminished in proportion to capital facilities needs and has been exacerbated by increased special education requirements and decreased rates of local funding from federal and state government. As a result, funds for the construction of new classroom facilities may not be available when new development occurs, eventually resulting in school overcrowding. In a partial attempt to bridge this funding gap, the State Legislature adopted the School Facilities Act of 1986 and added amendments effective in 1992 which establish ceilings for which school districts may charge mitigation fees based on the square footage of new residences and certain commercial and industrial uses. Under the 1992 amendments (SB 1287 of 1992), development projects as well as general plan amendments and rezonings may be subject to fees collected under the School Facilities Act. The practical result of

the School Facilities Act, as amended, is to assist in paying approximately 40% of new school cost needs in Shasta County. (6) Voter approved general obligation bonds are another source of funds for new school facilities, however the two-thirds voter approval needed has been difficult to obtain.

Due to long delays in receiving funding for new school facilities, school districts must project their future needs. Much of the growth within school districts will be determined by land use planning which is under the jurisdiction of the County. Therefore, the County is the logical entity to work with the school districts in projecting school needs for the unincorporated areas. The General Plan should establish a framework and strategy for school facility planning.

Recent case law has helped to clarify the role of the School Facilities Law of 1986 as only applying to development permits and projects. (7) The potential role or relationship of the General Plan in planning for school facilities can be better linked when school districts, whether jointly or individually, prepare and provide facilities plans for enrollment growth in their jurisdictions. Such facilities plans and forecasts can provide the respective districts with a basis for mitigating impacts on school facilities within the context of general plan and zoning amendments. As a result, one of the County's strategies for assuring that adequate school facilities are in place with new development should be to encourage and support school districts in such efforts.

A key to the County's strategy will be to encourage the Shasta County Office of Education to work with all affected school districts to develop standards for preparation of school facilities master plans by individual school districts, including facility financing plans. Presently, there are no state or local standards which guide the preparation of school facility master plans. Because of the large number of school districts in Shasta County, it will be necessary to strive for uniformity in the content of school facilities master plans so that the General Plan's commitment to working with school districts is done on a Countywide basis with reasonable consideration to school financing constraints and local economic and social factors.

In addition to the issues of school financing and facilities planning, school planning and siting must meet certain state requirements, including being located at least 350 yards from any high voltage electrical transmission facility. This state requirement is in place to protect against any potential human health effects to susceptible youth populations by electromagnetic fields which are emitted from such electrical transmission and transformer facilities. (8)

7.5.8 Objectives

PF-1 Development of a Countywide mechanism for managing the water resources of Shasta County while ensuring that local community desires regarding water service are respected. Countywide water supply options should be shared on a Countywide basis, and adequate supplies and quality of water should be available to serve development projected for the planning period.

PF-2 Encouragement of water conservation in all new development through the use of measures which result in the more efficient use of water.

PF-3 Achievement of an improved understanding of the ground water resources of Shasta County.

PF-4 Development of a comprehensive long-term plan for wastewater treatment within the County, coordinated with community development objectives and designed to provide this service in a manner making the most effective use of public resources.

PF-5 Achievement of an improved understanding of the opportunities and constraints governing the use of on-site wastewater treatment systems, both conventional and alternative, in Shasta County.

PF-6 Develop the Shasta County solid waste program in accordance with the adopted management plans.

PF-7 Development of a land use pattern which can be adequately served with community facilities such as schools, libraries, and community recreation.

7.5.9 Policies

PF-a The County shall take appropriate actions for achieving objective PF-1. Every opportunity for interjurisdictional and interagency cooperation shall be encouraged to this end.

PF-b Shasta County shall take appropriate actions for achieving objective PF-4. Every opportunity for interjurisdictional and interagency cooperation in other areas shall be encouraged to this end.

PF-c Shasta County shall permit experimentation with "alternative" wastewater treatment technologies on a limited and carefully controlled basis, including advance provision establishing what public or private entity will be responsible in the event of failure, to determine which systems are feasible.

PF-d Shasta County shall take actions required to implement plans for the management of its solid waste stream.

PF-e Shasta County should provide for septic tank disposal facilities in eastern Shasta County.

PF-f Shasta County may require the dedication of parklands or the payment of in lieu fees in accordance with County development standards in the areas of the County designated for urban/suburban development by the Community Development Element. Dedication shall be required only if the lands and fees so obtained will be maintained and administered by a local public agency which provides community recreation services.

PF-g The locations of existing and proposed large-scale community recreation facilities shall be designated on General Plan maps as Natural Resources Protection Parklands (N-P).

PF-h Shasta County should enter into cooperative planning arrangements with the County Superintendent of Schools for the exchange of data, the preparation of coordinated student enrollment projections, and the development of facility plans responsive to the growth of the County.

PF-i Shasta County shall encourage the County Office of Education to work with all affected school districts to prepare and recommend to the County standards for preparation of individual school facilities master plans which set forth, in a uniform Countywide fashion to the extent possible, reasonable assumptions concerning student population growth, facility needs to accommodate growth generated by new development, and targets for use of alternative means of new facility financing consistent with Government Code Section 65996, as may be amended, and other applicable laws and regulations.

PF-j Public uses (e.g. schools, parks, waste disposal sites) and public utilities (e.g. substation, transmission lines) whose site specific locations often cannot be identified in advance by the General Plan may be permitted throughout the County to serve the public need. Appropriate zoning on site specific locations will be determined in response to the identified need as it occurs. Solid waste disposal facilities shall be conditionally permitted to ensure that the site is compatible with adjacent land uses. Surrounding land uses, to the extent feasible, shall be regulated to avoid incompatibility with the solid waste disposal facilities.

Footnotes:

1. California's Ground Water, DWR Bulletin 118, Sept., 1975
2. Ground Water in the Redding Basin-Shasta and Tehama Counties, U.S.G.S. - Water Investigation Report 83-4052, 1983
   (Storage capacity is the volume of water that would drain by gravity from a given saturated thickness of the deposits underlying a designated groundwater basin.)
3. U.S.G.S. Report 83-4052, pg. 35
4. Churn Creek Task Force - Report to the City Council, City of Redding, August, 1991, Appendix 4
5. Source Reduction and Recycling Element, Shasta County and Cities of Anderson and Redding, Nov., 1991, pg. 1-3.
6. Personal conversation, Dr. Charles Menoher, Shasta County Superintendent of Schools, June 3, 1991
7. See Mira Development Corp v. City of San Diego, 205 Cal.App.3d 1201(1988)
8. See Land Use and Electromagnetic Fields, Zoning News, American Planning Associations, January, 1992

7.6 DESIGN REVIEW

7.6.1 Introduction

The Design Review Element is an optional General Plan element permitted by Section 65302 of the Government Code. Its status as an optional element is not meant to understate its role in planning, particularly as it relates to complementing the mandatory Land Use and Circulation Elements. The Design Review Element can also complement the Scenic Highways and Economic Development Elements.

Design review is concerned with the physical design of communities and rural residential landscapes. It involves reviewing certain types of development proposals to ensure that they conform to agreed upon community standards for design and appearance. It is the role of this element to provide general guidance and a framework to developing specific community oriented design review standards.

7.6.2 Scope of a Design Review Element in Shasta County

The influence of design review standards on the physical appearance of a town or community should be consistent with local character and the desire to create an appealing developed environment. A typical design review program will focus on the urban and suburban environment, but may also provide standards for rural residential development and for community centers in rural areas. Unlike most other land use programs, design review programs deal almost exclusively with design issues involving aesthetics that may include architectural style, building size and dimension, landscaping, color pattern, lighting, signing, and, in congested urban settings, how motorized and non-motorized transit modes can be best interlinked. Typical design review programs provide guidance to commercial and industrial development, as well as for large residential projects. General design criteria may be developed for other smaller projects and implemented through various development standards contained in or as a result of the zoning ordinance. If a design review program is well thought-out and allowed to be implemented over time, it has the potential to be one of the most important planning tools to affect the physical appearance and character of a community.

7.6.3 Design Review in Urban and Town Centers

A design review program has the greatest potential to affect an improved quality of life in urban and town centers. High activity areas, such as central business districts and community shopping centers, are extremely suited for specially tailored design review programs. Such efforts should be closely coordinated with economic development and redevelopment activities that affect each center. In Shasta County, the communities of Burney, Central Valley, Cottonwood, Fall River Mills and Palo Cedro contain centralized commercial districts for which special design review programs could be implemented. In Central Valley, the downtown area has been targeted for a design review program as part of implementing the area's 30 year redevelopment project. The implementation of design review programs in these areas should be accompanied by adoption of community design manuals which provide a theme and associated criteria for the review of new development.

In other commercial and industrial areas, a design review effort would be less thematic and more oriented to meeting countywide standards. For larger urban residential projects, a design review program should encourage the development of variety and interest among housing units and avoid the appearance of tract-like housing lacking in diversity. There should be an emphasis on landscaping which aids in reducing the domination of residential settings by streets. One of the most effective ways to visually de-emphasize the impact and scale of residential streets is to provide large shade trees along side the street with pedestrian walkways located on the opposite side of the tree-planted landscape strip.

7.6.4 Design Review in Rural Communities

The focus of a design element in rural community and residential areas should center on blending commercial and residential development with natural landscape features afforded by these rural settings. The overall objective of enhancing the natural environment within the context of rural development can be achieved by encouraging development which is as unobtrusive to the natural setting as possible. Design review issues in rural areas generally will involve the use of appropriate building color, fencing and screening, maintenance of viewsheds, use of natural vegetation and terrain when integrating development, and the appropriate mixing of uses in rural centers and private recreational areas.

7.6.5 Countywide Design Review Standards

The development of the county's design review program involves following three related steps. First, the county should develop general guidelines for countywide application of a design review program. This first step would encompass revising the present zoning ordinance and/or related development standards and conditions. Second, the county would begin developing design review programs specific to those areas slated for community planning efforts and which are consistent with the countywide design review standards. Third, the county could consider creating a special design review body with authority to review specific projects and design review policies.

7.6.6 Objectives

DR-1 Promote a visually appealing developed environment in urban, suburban, town center, mixed use and rural residential settings.

DR-2 Provide the county's communities the opportunity to develop their individual and local character, as reflected by citizens involved in their planning process.

DR-3 Assure that design review standards are cost-effective and promote the value of development, while being consistent with overall economic development themes and programs.

7.6.7 Policies

DR-a Design review zoning should be applied to identify areas where special design considerations are needed to promote a design theme for a community center, large commercial or industrial areas, or for a major urban highway corridor. The application of design review zoning should be avoided where a single parcel or small groups of parcels are involved, or where the protection of natural resources or viewshed can be assured by implementation of more appropriate zoning.

DR-b The county should include the development of a community oriented design review manual as part of the work plan when preparing community plans for areas defined by Policy CO-r or when implementing other economic development plans for the county's urban communities.

DR-c The county, as staff time permits, should prepare specific design review criteria for areas where design review zoning has been defined. Such areas include, but are not limited to the Clear Creek and Ashby Road industrial areas, along Interstate 5 in urban areas and an other tracts of land where such zoning occurs.

DR-d The county should revise the zoning ordinance's design review combining district so as to assure implementation of the county's design review program.

DR-e As various elements of the design review program are developed, the county should consider the formation of a design review committee consisting of a spectrum of citizens interests which acts to review projects based on adopted design review standards.

SHASTA COUNTY

GENERAL PLAN

APPENDICES A & B

Employment, and Housing Projections

Environmental Noise

Volume II

January 10, 1984
Reprinted November 10, 1996
Reprinted April 28, 1997

APPENDIX A

Employment, and Housing Projections

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I. INTRODUCTION

A. PURPOSE

The pattern of future land use in Shasta County will be determined by the amount and rate of population and related growth which it will experience. In order to adequately plan for this growth, projections have been developed for population, employment, and housing for the period of 1980 to 2000. Appendix B - Development Suitability Analysis, examines the "supply" side of the future land use supply/demand equation in Shasta County. This appendix presents the demand side of this equation. As shown in Figure 1, balancing land use demand against supply will identify the land use planning issues which must be addressed by policies contained in the revised General Plan. These policies will provide the basis for developing land use regulations and ordinances.

Prior to presenting these projections, it is important to briefly consider the relationship between population and employment growth and local government land use planning. First, growth is the result of the complex and only imperfectly understood interaction of many factors, almost all of which are beyond the control of local government. Second, national and international events all have implications for the population and economic growth which will be experienced by a state, a county, or a city.

Although local governments cannot control these external events, they are by no means powerless to influence how growth will affect the patterns of land use within their jurisdictions. How successfully they will be in part depends on the level at which efforts to influence growth are conducted. Within a metropolitan region, one city may successfully capture or exclude growth which would otherwise occur or not occur elsewhere in the region. At the regional level, however, the total amount of growth experienced or not experienced by the region is less easily manipulated, due in part to the separate and often competing land use planning efforts of local governments. Even assuming a coordinated regional growth policy, the presence or absence of growth pressures may be so inexorable as to be total unresponsive to this policy. When this occurs, the resulting land use pattern may demonstrate unintended or unanticipated side effects.

It is also important to understand the function of growth projections in the planning process. As defined by Webster's, a projection is "an estimate of future possibilities based on a current trend." The key word in this definition is "estimate"; a projection is only a professional judgment of what may happen, not what will or what should happen. Because growth projections are estimates, frequently they are expressed as ranges defined by what presently appear to be reasonable lower and upper limits. This approach is used in this appendix. Again it is important to keep in mind that these ranges do not express what should or will happen. It is entirely possible that the growth which Shasta County will experience during the next two decades may fall short of or exceed that contained within the projection ranges.

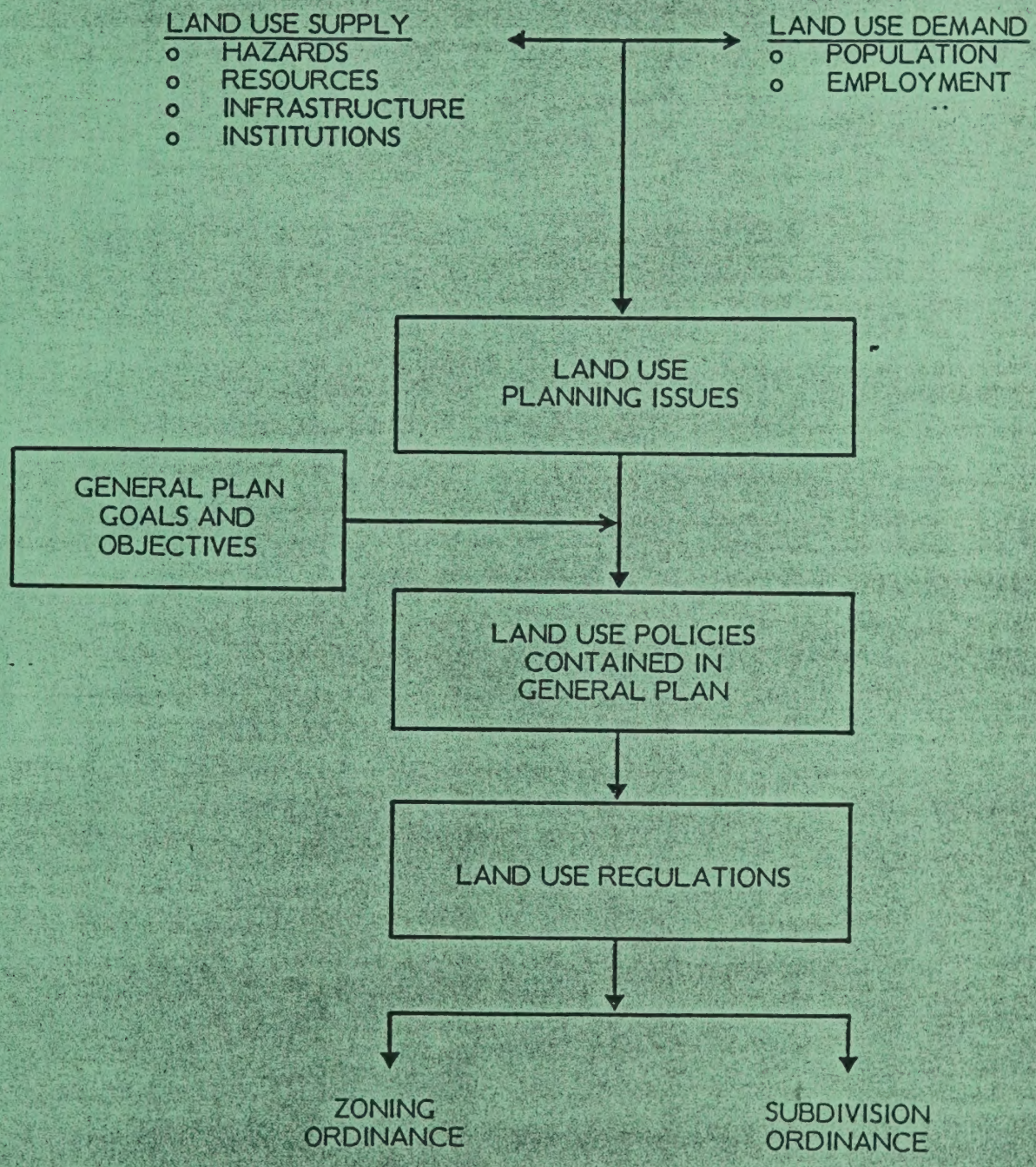

FIGURE 1: LAND USE PLANNING PROCESS

B. ORGANIZATION AND CONTENTS

This appendix is divided into two parts, the first of which describes the methodologies and results of the population, employment, and growth projections. Part II discusses the conversion of employment and housing projections into land use requirements or demands on a countywide basis.

C. USE OF THIS APPENDIX

The primary use of this appendix is as an informational document, explaining the approach which was followed in obtaining data and analyzing the various factors in Shasta County which will determine the future demand for land use. It is important that persons participating in the planning process understand this approach and its implications for land use policy.

II. PROJECTION METHODOLOGIES AND RESULTS

The population, employment, and housing projections presented in this appendix foll and build upon an earlier report, Shasta County Population, Employment, and Housi Trends, prepared in 1977 for the Shasta County Planning Department. Data from th appendix were revised and updated in this effort. A major problem with the n projections was the lack of detailed 1980 census data. Preliminary census data we used in combination with other data sources to establish base-year (1980) statistics

Population growth was used as the independent variable in the projections. This somewhat counter-intuitive since population growth ultimately depends upon growth basic employment. Population growth was used for several reasons. First, a reliab population projection prepared by the State Department of Finance (DOF) exist Second, Shasta County's economy is uncharacteristic of normal relationships betwe basic industry and population serving industry and population. This is primarily d to the significant component of the local economy represented by retirees receivi Social Security payments and income from other private pension sources, and by perso receiving public assistance payments. Third, population growth is easily understo and converts directly into other projections.

A. POPULATION

Two population projections were prepared for Shasta County for the years 1985, 199 1995, and 2000. These projections bound a reasonable range of expected populati growth. The lower projection is based upon the 1977 California Department of Finan E-150 projection. It would result in a total of 159,000 people by the year 2000. T higher population is based upon more recent growth trends which indicate a high level of growth than projected in the original E-150 projections. It would result 200,000 people by the year 2000.

Population growth in Shasta County during the 1970's indicated an average annu growth rate of 3.94%. This average masks the fact that growth increased rapid during the last three years of the decade. Table 1 shows a year-by-year analysis Shasta County's growth during the 1960's and 1970's.

The average compound growth rate from 1976 and 1980 was 4.9% which represents population increase in excess of 6000 persons per year. It is unlikely that Shas County could sustain this rate of growth over the next 20 years. The major limiti factor will be the economic base; that is, the jobs to attract new populatio Another limiting factor will be the ability for local government to provide publ services such as roads, schools, sewer and water to such a rapidly expandi population. Nonetheless, a population higher than the original E-150 projection is least a distinct possibility.

In preparing the projection, both the job formation issue and the public service issu was analyzed. The projection that resulted from this process indicated a continuati of rapid rate of population growth during the first half of the 1980's, followed by gradually declining growth rate over the balance of the century. Total populati under this projection would reach 200,000 by the year 2000. Table 2 shows the tw projections for Shasta County's population over the next 20 years. Tables 3 and show the expected age/sex distribution for the two projections.

Each of the two population projections is a reasonable reflection of existing trends and capabilities. The higher of the two projections would probably require the location of major new basic industry in the County, a significant increase in the percent of retirees moving to the County, or some combination thereof.

B. EMPLOYMENT

Employment projections were derived from the population projections by applying labor force participation rates. As stated earlier, this method ignores the actual casual relationship which exists between employment and population. However, short of a Countywide input/output model of future employment in Shasta County, the participation-rate approach is the relative stability and simplicity of Shasta County's economy. Regardless of projection methodology, a simple fact remains clear: future population growth as indicated by the population projections will require new basic industry jobs. This is particularly true for the upper-bound projection.

Prospects for new employment in Shasta County are dependent upon growth of the existing basic development of new industries, and other sources of income to the County, including the in-migration of retirees.

A general shift can be expected in Shasta County's economy, away from what was once an economy based largely on timber and timber products, toward a more service-based economy. The projections of employment for the two growth projections are shown in Table 5.

TABLE 1: SOURCES OF SHASTA COUNTY POPULATION GROWTH
1960 through 1979

Year	Year-End Population	Annual Increase	Births	Deaths	Natural Increase	Net In-Migration
1960	61,500	2,600	1,330	493	837	1,763
1961	63,800	2,300	1,362	515	847	1,453
1962	66,500	2,700	1,448	518	930	1,770
1963	69,600	3,100	1,353	610	743	2,357
1964	72,500	2,900	1,431	600	831	2,069
1965	74,900	2,400	1,407	565	842	1,558
1966	76,350	1,450	1,301	596	705	745
1967	76,700	350	1,264	633	631	-281
1968	76,500	-200	1,174	686	488	-688
1969	77,150	650	1,306	728	578	72
1970	78,000	850	1,361	716	645	205
1971	80,500	2,500	1,354	721	633	1,867
1972	82,400	1,900	1,216	717	499	1,401
1973	86,300	3,900	1,190	771	419	3,481
1974	89,800	3,500	1,137	736	401	3,099
1975	92,500	2,700	1,150	749	401	2,299
1976	94,800	2,300	1,203	816	387	1,913
1977	100,700	5,900	1,384	825	559	5341
1978	107,300	6,600	1,543	886	657	5,943
1979	113,200	5,900	1,713	942	771	5,129

Source: California Department of Finance, Population Research Unit and McDonald & Associates

TABLE 2: SHASTA COUNTY POPULATION PROJECTIONS
1980 through 2000

	Low Growth Projection[1]			High Growth Projection[2]		
Year	End Year Population	Implied 5-Year Compound Growth Rate	5-Year Average Annual Growth	End Year Population	Implied 5-Year Compound Growth Rate	5-Year Average Annual Growth
1980	114,800	4.41%	4,460	114,800	4.41%	4,460
1985	124,700	1.67%	1,980	141,400	4.26%	5,320
1990	137,100	1.91%	2,480	167,500	3.45%	5,220
1995	148,600	1.62%	2,300	185,200	2.03%	3,540
2000	159,000	1.36%	2,080	200,000	1.55%	2,960

Source: Angus McDonald & Associates

[1]Low Growth Projection is consistent with the California State Department of Finance (DOF) 1977 E-150 Projection for Shasta County.

[2]High Growth Projection is trend projection based upon growth between 1970 and 1980 and a constraints analysis.

TABLE 3: SHASTA COUNTY POPULATION AGE DISTRIBUTION

	Historical						Low Projection								High Projection							
	1970		1975		1980		1985		1990		1995		2000		1985		1990		1995		2000	
Age Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
0-14	22,761	29.2	22,781	24.1	25,250	21.9	26,177	21.0	28.704	20.9	30,430	20.5	30,084	18.9	29,694	21.0	35,008	20.9	37,966	20.5	37,800	18.9
15-19	7,656	9.9	9,320	9.9	10,110	8.8	9,983	8.0	8,781	6.4	9,597	6.5	10,960	6.9	11,312	8.0	10,720	6.4	12,038	6.5	13,800	6.9
20-24	4,693	6.0	7,142	7.6	8,310	7.2	8,873	7.1	7,751	5.7	7,336	4.9	7,943	5.0	10,039	7.1	9,548	5.7	9,075	4.9	10,000	5.0
25-34	9,629	12.4	13,804	14.7	18,410	15.9	19,139	15.3	19,769	14.4	19,235	12.9	18,006	11.3	21,364	15.3	24,120	14.4	23,891	12.9	22,600	11.3
35-44	9,268	12.0	11,350	12.1	15,790	13.7	20,054	16.1	23,278	17.0	24,259	16.3	24,749	15.6	22,765	16.1	28,475	17.0	30,188	16.3	31,200	15.6
45-49	4,803	6.2	5,060	5.4	6,130	5.3	7,186	5.8	9,562	7.0	12,296	8.3	12,739	8.0	8,201	5.8	11,725	7.0	15,372	8.3	16,000	8.0
50-54	4,292	5.5	5,413	5.7	6,010	5.2	6,378	5.1	7,651	5.6	10,134	6.8	12,990	8.2	7,211	5.1	9,380	5.6	12,594	6.8	16,400	8.2
55-59	4,167	5.4	4,928	5.2	6,560	5.7	6,313	5.1	6,817	5.0	8,120	5.5	10,720	6.7	7,211	5.1	8375	50	10,186	5.5	13,400	6.7
60-64	3,387	4.4	4,668	4.9	6,040	5.2	6,912	5.5	6,714	4.9	7,193	4.8	8,533	5.4	7,777	5.5	8,208	4.9	8899	4.8	10,800	5.4
65+	6,934	9.0	9,675	10.1	12,810	11.1	13,685	11.0	18,073	13.1	20,000	13.5	22,276	14.0	15,556	11.0	21,941	13.1	25,001	13.5	28,000	140
TOTAL	77,640	100	94,429	100	115,440	10	124,700	10	13,700	100	148,600	100	159,000	100	141,400	100	167,500	100	185,200	100	200,000	100

Source: California Department of Finance and Angus McDonald & Associates

TABLE 4A: SHASTA COUNTY AGE/SEX DISTRIBUTION OF POPULATION - LOW PROJECTION

Age Group	1980 Total	1980 Male	1980 Female	1985 Total	1985 Male	1985 Female	1990 Total	1990 Male	1990 Female	1995 Total	1995 Male	1995 Female	2000 Total	2000 Male	2000 Female
0-14	25,250	13,017	12,233	26,177	13,435	12,742	28,704	14,714	13,990	30,430	15,592	14,838	30,084	15,414	14,670
15-19	10,110	5,079	5,031	9,983	4,743	5,240	8,781	4,448	4,333	9,597	4,855	4,742	10,960	5,535	5,425
20-24	8,310	4,115	4,195	8,873	3,992	4,881	7,751	3,828	3,923	7,336	3,588	3,748	7,943	3,868	4,075
25-34	18,410	9,070	9,340	19,139	9,537	9,602	19,769	9,878	9,891	19,235	9,606	9,629	18,006	9,036	8,970
35-44	15,790	7,689	8,101	20,054	9,848	10,206	23,278	11,515	11,763	24,259	12,110	12,149	24,749	12,351	12,398
45-49	6,130	3,018	3,112	7,186	3,522	3,664	9,562	4,666	4,896	12,296	6,097	6,199	12,739	6,361	6,378
50-54	6,010	2,948	3,062	6,378	3,124	3,254	7,651	3,730	3,921	10,134	4,922	5,212	12,990	6,399	6,591
55-59	6,560	3,159	3,401	6,313	3,066	3,247	6,817	3,302	3,515	8,120	3,916	4,204	10,720	5,154	5,566
60-64	6,040	2,890	3,150	6,912	3,240	3,672	6,714	3,173	3,541	7,193	3,369	3,824	8,533	4,009	4,524
65+	12,810	5,817	6,993	13,685	5,960	7,725	18,073	7,590	10,483	20,000	8,181	11,819	22,276	8,959	13,317
TOTAL	115,440	56,812	58,588	124,700	61,060	63,640	137,100	66,845	70,255	148,600	72,261	76,339	159,000	77,135	81,865

Source: California Department of Finance and Angus McDonald & Associates.

TABLE 4B: SHASTA COUNTY AGE/SEX DISTRIBUTION OF POPULATION - HIGH PROJECTION

Age Group	1980 Total	1980 Male	1980 Female	1985 Total	1985 Male	1985 Female	1990 Total	1990 Male	1990 Female	1995 Total	1995 Male	1995 Female	2000 Total	2000 Male	2000 Female
0-14	25,250	13,017	12,233	29,694	15,233	14,461	35,008	17,959	17,049	37,966	18,451	19,515	37,800	19,354	18,446
15-19	10,110	5,079	5,031	11,312	5,373	5,939	10,720	5,435	5,285	12,038	6,091	5,947	13,800	6,969	6,831
20-24	8,310	4,115	4,195	10,039	4,518	5,521	9,548	4,717	4,831	9,075	4,438	4,637	10,000	4,870	5,130
25-34	18,410	9,070	9,340	21,364	10,639	10,725	24,120	12,060	12,060	23,891	11,922	11,969	22,600	11,345	11,255
35-44	15,790	7,689	8,101	22,765	11,178	11,587	28,475	14,095	14,380	30,188	15,064	15,124	31,200	15,569	15,631
45-49	6,130	3,018	3,112	8,201	4,018	4,183	11,725	5,722	6,003	15,372	7,625	7,747	16,000	7,984	8,016
50-54	6,010	2,948	3,062	7,211	3,533	3,678	9,380	4,577	4,803	12,594	6,121	6,473	16,400	8,085	8,315
55-59	6,560	3,159	3,401	7,211	3,505	3,706	8,375	4,054	4,321	10,186	4,910	5,276	13,400	6,445	6,955
60-64	6,040	2,890	3,150	7,777	3,647	4,130	8,208	3,882	4,326	8,889	4,200	4,689	10,800	5,076	5,724
65+	12,810	5,817	6,993	15,824	7,421	8,403	21,941	9,215	12,726	25,001	10,225	14,776	28,000	13,160	14,840
TOTAL	115,440	56,812	58,588	141,400	69,065	72,335	167,500	81,716	85,784	185,200	89,047	96,153	200,000	98,857	101,143

Source: California Department of Finance and Angus McDonald & Associates.

TABLE 5: SHASTA COUNTY EMPLOYMENT PROJECTIONS BY INDUSTRY

Industry	Persons Employed								
	Low Projections					High Projections			
	1980	1985	1990	1995	2000	1985	1990	1995	2000
Agricultural, Forestry, and Ranching	700	624	686	743	795	707	838	926	1,000
Mining	35	37	41	45	48	42	50	56	60
Construction	2,915	3,492	3,839	4,161	4,452	3,959	4,690	5,186	5,600
Manufacturing	4,750	4,738	5,209	5,647	6,042	5,374	6,365	7,038	7,600
Transportation	2,825	3,492	3,839	4,161	4,452	3,959	4,691	5,186	5,600
- Trucking and Warehousing	—	998	1,097	1,189	1,272	1,131	1,340	1,482	1,600
- Communications, Electric, Gas, Sanitary and Other	—	2,494	2,742	2,972	3,180	2,828	3,351	3,704	4,000
Wholesale Trade	1,600	1,871	2,057	2,229	2,385	2,121	2,512	2,778	3,000
Retail Trade	7,000	8,480	9,323	10,105	10,812	9.614	11,392	12,593	13,600
- Building Materials	—	873	960	1,040	1,113	989	1,173	1,296	1,400
- Food Stores, Eating and Drinking, and Other	—	7,607	8,363	9,065	9,699	8,625	10,219	11,297	12,200
Finance Insurance, and Real Estate	1,400	1,496	1,645	1,783	1,908	1,697	2,010	2,222	2,400
Services	6,975	8,480	9,323	10,105	10,812	9,614	11,392	12,593	13,600
- Hotel and Other Lodging	—	1,247	1,371	1,486	1,590	1,414	1,675	1,852	2,000
- Other Services	—	7,233	7,952	8,619	9,222	8,200	9,717	10,741	11,600
Government	9,700	10,849	11,928	12,928	13,833	12,302	14,573	16,113	17,400
Nonclassifiable	—	249	274	297	318	283	335	370	400
TOTAL	37,900	43,808	48,164	52,204	55,857	49,672	58,847	65,061	70,260

Source: California Employment Development Department Statistics 1960-1980, and Angus McDonald & Associates.

C. HOUSING

Housing projections were developed using population projections combined with trenc in the existing housing market with respect to household size, vacancy rate, ar housing type.

Average household sizes are expected to stabilize after a long decline throughout th 1970's. A small increase of average household size is expected based upon a recer increase in birth rates and a continued experience of high housing costs which wil encourage larger households.

Vacancy rates are expected to drop from their current high level, although they wil remain at a level consistent with a growing community.

Housing type is concerned with the distribution between single-family and multifamil housing. Shifts in this distribution will impact both the total number of projecte units, and more importantly, the land consumption requirements of these units. Fc comparison purposes, two housing unit projections were developed. One projectic assumes continuation of the current distribution of single, relative to multifamil housing. The other assumes a shift to relatively more multifamily housing.

Table 6 shows the projected household sizes and vacancy rates used in developing th housing-unit projections, which are presented in Table 7.

TABLE 6: PROJECTED HOUSEHOLD SIZES AND VACANCY RATES FOR SHASTA COUNTY

Housing Type	1980 (Estimated) Household Size	1980 (Estimated) Vacancy Rate	1990 Projected Household Size	1990 Projected Vacancy Rate	2000 Projected Household Size	2000 Projected Vacancy Rate
Single-Family	2.9[1]	12[2]	3.0	10	3.0	8
Multifamily	2.0	7	2.2	7	2.2	6
Mobile Home	2.5	7	2.6	6	2.6	6

Source: Angus McDonald & Associates

[1]persons

[2]percent

TABLE 7: HOUSING UNIT PROJECTIONS FOR SHASTA COUNTY

CURRENT HOUSING TRENDS CONTINUED[1]

	Total 1980	Increase 1980-1990	Total 1990	Increase 1990-2000	Total 2000
Low Projection	45,800	7,800	53,600	7,400	61,000
High Projection	45,800	19,800	65,600	11,400	77,000

SHIFT TO MORE MULTIFAMILY HOUSING[2]

	Total 1980	Increase 1980-1990	Total 1990	Increase 1990-2000	Total 2000
Low Projection	45,800	7,900	53,700	7,800	61,500
High Projection	45,800	21,100	66,900	11,600	78,500

Source: Angus McDonald & Associates and Sedway/Cooke.

[1] Assumes distribution of new single-family housing (including mobile homes) relative to new multifamily housing of 85% to 15%.

[2] Assumes distribution of new single-family housing (including mobile homes) relative to new multifamily housing of 75% and 25%.

II. CONVERSION OF PROJECTIONS INTO ESTIMATES OF LAND USE DEMANDS

A. CONVERSION FACTORS

Employment and housing projections are converted into estimates of land use demand through the use of factors which express demand in acres. Factors used for converting employed persons into acreage requirements are based on average floor space and site requirements for the respective employment categories. These factors and their underlying assumptions are shown in Table 8. Factors were not developed for agriculture, forestry, and ranching because the land resources required by these activities, especially forestry, have been excluded from the available land supply. Mining was similarly not considered, both because of its numerical insignificance and because it is extremely site-specific. Construction was excluded because the location of these jobs fluctuates. Government was excluded because these activities will largely occur on lands already under government ownership or control, and land use demand for school facilities is being considered separately.

Converting housing-unit projections into land use demand is a less straightforward process because it must account for housing-unit type (single-family, multiple-family, and mobile or manufactured housing) and the array of lot sizes within a particular type. Housing-unit conversion factors are given in Table 9. These conversion factors differ from those ultimately used in the General Plan. It was through the testing and analysis of these preliminary conversion factors that the final factors used in the Plan were developed.

As will be seen in Section B, which follows, a series of housing land use demand projections was developed based on different assumed distributions of housing-unit types and lot sizes. Based on recent changes in state law (Government Code Section 65852.3), mobilehomes on foundations are treated as a type of single-family housing.

B. EMPLOYMENT LAND USE DEMAND

The conversion factors presented in Table 8 were applied to employment projections in Table 5 to derive the land use demand requirements shown in Table 10. Total land use demand through the year 2000 for the low and high projections is 493 and 904 acres, respectively.

C. HOUSING LAND USE DEMAND

Land use demand for housing is a function both of the total number of units and the type of units that are in demand (e.g., large lot, single-family, multiple-family). It is extremely difficult to project the type of housing which will be in demand in Shasta County over the next 20 years, and currently trends provide only limited guidance.

TABLE 8: FACTORS FOR CONVERTING EMPLOYMENT PROJECTIONS INTO LAND USE DEMAND

Employment Category	Factor[1]
Manufacturing[2]	15 Employees per acre
Transportation	
- Trucking and Warehousing	10 Employees per acre
- Communications, Electric, Gas, Sanitary and Other	15 Employees per acre
Wholesale Trade	10 Employees per acre
Retail	
- Building Materials	20 Employees per acre
- Food Stores, Eating and Drinking, and Other	36 Employees per acre
Finance, Insurance and Real Estate[3]	70 Employees per acre
Services	
- Hotel and Other Lodging[4]	56 Employees per acre
- Other Services	50 Employees per acre

Source: Sedway/Cooke

[1] All factors represent average number of employees per acre.

[2] Assumes 50% site coverage, single-story construction, and approximately 1,500 square feet/employee.

[3] Assumes 1 parking space/1.4 employees, plus 10 visitor spaces, 350 square feet of space/employee, 7% of site is landscaping, and single-story construction.

[4] Assumes 45 units/acre and .8 employees/room.

TABLE 9: FACTORS FOR CONVERTING HOUSING PROJECTIONS INTO LAND USE DEMAND

Housing Unit Type	Mean Density
- Urban lot size (up to 16 du/a[1])	4.5
- Suburban lot size (.5 to 3 du/a)	2
- Rural lot size (.5 —)	.25

[1]du/a = Dwelling units per gross acre

TABLE 10: EMPLOYMENT LAND USE REQUIREMENTS FOR SHASTA COUNTY
1990 and 2000

	Additional Acres of Land Required									
	Low Projection					High Projection				
Employment Category	1985	1990	1995	2000	Cumulative Total	1985	1990	1995	2000	Comulative Total
Manufacturing	-	31	30	26	87	42	66	45	38	191
Transportation	53	27	21	22	123	91	56	38	32	217
- Trucking and Warehousing		10	6	8	24		21	14	12	47
- Communications, Gas, Electric, Sanitary and Other		17	15	14	46		35	24	20	79
Wholesale Trade	27	19	17	16	79	52	39	27	22	140
Retail	53	25	24	22	124	93	53	36	30	212
- Building Materials		4	4	4	12		9	6	5	20
- Food Stores, Eating and Drinking, Other		21	20	18	59		44	30	25	99
Finance, Insurances and Real Estate	1	2	2	2	7	4	5	3	3	15
Services	28	16	15	14	73	50	35	24	20	129
- Hotel and Other Lodging		2	2	2	6		5	3	3	11
- Other Services		14	13	12	39		30	21	17	68
TOTAL	162	120	109	102	493	332	254	173	145	904

Source: Sedway/Cooke

D. DISTRIBUTION OF POPULATION GROWTH BY PLANNING AREAS

Following the conversion of the Countywide population, housing and employment projections to land use needs, this information was distributed into each planning area and ultimately to the community level. This is quantitatively expressed in Tables 11 and 12. Table 11 shows the distribution of growth to each of the 10 planning areas by population, new housing units and acres of land required for these new units, while Table 12 shows the distribution of growth within each planning area. These tables categorize dwelling units according to the General Plan land use designation of Urban, Suburban and Rural Residential.

TABLE 11: DISTRIBUTION OF POPULATION AND DWELLING UNIT GROWTH PROJECTIONS BY PLANNING AREAS

Planning Area	1980 Pop. (D.U.)[1]	% of Year 2000 Population	Add'l Pop.[2]	Add'l D.U.[3]	Distribution of Units[4]			Acres of Land[5]			Total Acres
					Urban	Sub-Urban	Rural	Urban	Sub-Urban	Rural A	
Sacramento Canyon	1,619 (641)	1	400	140	-	-	140	-	-	560	560
Northwestern Forest	809 (321)	.45	100	30	-	-	30	-	-	120	120
Big Bend	1,119 (458)	.7	300	100	-	-	100	-	-	400	400
North East Shasta	7,618 (3,067)	6	4,400	1,680	490	680	510	120	420	2,040	2,580
Lassen	270 (93)	Less than 1	0	0	-	-	-	-	-	-	0
Eastern Forest	2,170 (870)	1.4	600	230	-	-	230	-	-	920	920
Eastern Upland	2,757 (1,099)	1.9	1,000	390	-	-	390	-	-	1,560	1,560
South Central Region	96,010 (38,276)	87	78,000	30,020	1,060	13,450	6,200	270	6,730	24,760	31,760
Western Upland	1,822 (733)	1.2	600	210	-	-	210	-	-	840	840
French Gulch	1,257 (504)	.35	100	30	-	-	30	-	-	120	120
TOTAL	115,450 (46,050)	100%	85,500	32,830	1,550	14,130	7,840	390	7,150	31,320	38,860

[1] Population (dwelling units)

[2] Additional population rounded to nearest 100

[3] Additional dwelling units

[4] SCR totals exclude cities

[5] Acres of land rounded to nearest 10,

TABLE 12: DISTRIBUTION OF POPULATION AND DWELLING UNIT GROWTH PROJECTIONS WITHIN PLANNING AREAS

Planning Area	1980 Pop.(D.U.)	% of Year 2000 Population	Add'l Pop.[2]	Add'l D.U.[3]	Distribution of Units[4]			Acres of Land[5]			Total Acres
					Urban	Sub-Urban	Rural	Urban	Sub-Urban	Rural A	
Eastern Upland	2,757 (1,099)	1.9	1,000	390	-	-	390	-	-	1,560	1,560
- Millville			490	190	-	-	190	-	-	760	760
- Whitmore			190	75	-	-	75	-	-	300	300
- Oak Run			320	125	-	-	125	-	-	500	500
South Central Region	96,010 (38,276)	87	78,000	30,020	1,060	13,450	6,200	270	6,730	24,760	31,760
RURAL COMMUNITY CENTERS											18,040
Mountain Gate	1,600		990	380	-	-	380	-	-	1,520	1,520
Jones Valley	500		310	120	-	-	120	-	-	440	440
Bella Vista	2,654		3,640	1,400	-	-	1,400	-	-	5,600	5,600
Happy Valley	5-6,000		3,120	1,200	-	-	1,200	-	-	4,800	4,800
Centerville	1,481		3,120	1,200	-	-	1,200	-	-	4,800	4,800
Shasta/ Keswick	1,930		570	220	-	-	220	-	-	880	880
TOWN CENTERS											5,950
Central Valley	8,560		9,980	3,440	840	2,500	100	210	1,250	400	1,860
Cottonwood	3,425		2,420	1,080	100	730	250	30	370	1,000	1,400
Palo Cedro	3,561		1,980	760	-	100	660	-	50	2,640	2,690

APPENDIX B

Environmental Noise in Shasta County

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I. FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

Noise can be defined as the presence of unwanted or undesirable sound in one's community or environment. Understanding community noise requires a familiarity with the physical description of sound and the ways humans race to different sounds. The important physical characteristics of environmental sound include frequency, intensity and temporal (time-varying) behavior.

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. The pressure fluctuation is caused by a vibrating object and is received by the ear and perceived by the brain as sound. Noise is defined as unwanted or undesired sound. The frequency, or pitch, of a sound refers to the number of complete pressure fluctuations per second. The unit of measurement is the cycle per second (cps) or Hertz (Hz). Most of the sounds which are heard in the environment do not consist of a single frequency, but of a broad band of frequencies. The audible frequency range for humans if from about 20 Hz to 20,000 Hz.

The intensity, or loudness, of a sound is the amount the pressure fluctuates above and below atmospheric pressure. The human ear is sensitive to a very wide range of sound pressures. A logarithmic scale, called the decibel (dB) scale in honor of Alexander Graham Bell, is used to compress this wide range. Also, people hear changes in sound intensities in proportion to the logarithm of the intensities. The threshold of human hearing corresponds roughly to 0 dB, and the threshold of pain is about 140 dB.

Many rating methods have been devised to permit comparisons of sounds having quite different composition. Fortunately, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the content of a sound in accordance with a weighting that progressively and severely deemphasizes the importance of frequency components below 1000 Hz, with mild deemphasis above 5000 Hz. This type of frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and extreme high frequencies than in the mid-frequency range. The weighting curve is called "A" weighting, and the level so measured is called the "A-weighted sound level," or simply "A-level."

The A-level in decibels is expressed "dBA"; the appended letter "A" is a reminder of the particular kind of weighting used for the measurement. In practice, the A-level of a sound source is measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. All U.S. and international standard sound level meters include such a filter. Typical A-levels measured in the environment and in industry are shown in Table 1.

Although the A-level may adequately describe environmental sound at any instant in time, the fact is that the community sound level varies continuously. Most environmental sound includes a conglomeration of distant sources which creates a relatively steady "background noise" in which no particular source is identifiable. These distant sources may include traffic, wind in trees, industrial activities, etc. These noise sources are relatively constant from moment to moment, but vary slowly from hour to hour as natural forces change or as human activity follows its daily cycle. Superimposed on this slowly varying background is a succession of identifiable noise events of brief duration. These may include nearby activities or single vehicle passages, aircraft flyovers, etc., which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental sound, the statistical descriptors L10, L50 and L90 are commonly used. These descriptions respectively represent the A-weighted sound levels equaled or exceeded 10, 50 and 90 percent of a stated time period.

TABLE 1: TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND IN INDUSTRY

	Decibels A-Weighted	
CIVIL DEFENSE SIREN (100')	140	THRESHOLD OF PAIN
JET TAKEOFF (200')	130	
	120	
RIVETING MACHINE	110	ROCK MUSIC BAND
EMERGENCY ENGINE-GENERATOR (6') DC-10 FLYOVER (700)	100	PILE DRIVER (50')
SUBWAY TRAIN (20')	90	BOILER ROOM PRINTING PRESS PLANT
PNEUMATIC DRILL (50')	80	GARBAGE DISPOSAL IN HOME (3') INSIDE SPORTS CAR, 50 MPH
FREIGHT TRAIN (100') VACUUM CLEANER (10') SPEECH (1')	70	
	60	AUTO TRAFFIC NEAR FREEWAY LARGE STORE ACCOUNTING OFFICE
LARGE TRANSFORMER (200')	50	PRIVATE BUSINESS OFFICE LIGHT TRAFFIC (100') AVERAGE RESIDENCE
	40	MINIMUM LEVELS, RESIDENTIAL AREAS IN SAN FRANCISCO AT NIGHT
SOFT WHISPER (5')	30	DAYTIME LEVELS IN SHASTA COUNTY RURAL AREAS
RUSTLING LEAVES	20	RECORDING STUDIO
	10	
THRESHOLD OF HEARING IN YOUTHS (1000-4000 Hz)	0	

NOTE: The distance (in feet) between the source and listener is shown in parenthesis.

II. NOISE CRITERIA FOR LAND USE PLANNING

Planning criteria with respect to community noise environments must distingu: between the reception and generation of noise. Both types of criteria are concer with the existing sound environment, but each approaches it from a differe perspective.

Different land uses demonstrate varying degrees of tolerance as receivers of sounds. single family detached house, for example, has a lesser tolerance for no: environments than a gravel extraction and processing operation. Recognizing the differences, criteria can be established for locating new land uses in varic existing noise environments. Criteria developed for this purpose by the Californ Office of Noise Control are shown in Table 3. The horizontal axis of this cha presents community sound exposure environments, expressed as Ldn values. The vertic axis lists land use types. The interpretive parts or bands provide criteria f locating these land uses within these sound exposure environments.

As an example of how to use the land use compatibility chart for community noi environments, consider a proposal for a new single family subdivision to be locat 1,100 feet from the center of Interstate 5. At this distance, the existing Ldn is dB. At this level, the land use compatibility chart shows that the land use satisfactory and would not require any special noise insulation requirements. Th means that both the indoor and outdoor noise environments would be acceptable. If t same subdivision were being proposed at a distance of 240 feet from the center Interstate 5, the exterior Ldn would be 70 dB. This would be considered conditionally acceptable noise exposure. The conditions being that provision in t design would have to be made to attenuate outdoor noise levels to an acceptab value; approximately 60 Ldn, and to reduce indoor noise levels such that they wou not interfere with activity or sleep. This is generally considered to be an interi Ldn of about 45 dB. Conversely, if a lumber mill were being proposed at 240 feet fr the center of Interstate 5, this would be an acceptable land use with no speci requirements.

The above criteria focus on land uses as receivers of sound. Conversely, land us also generate sound. Planning criteria responsive to sound generation by land us are designed to protect existing community sound environments from the intrusion noisy land uses. The first step in establishing planning criteria of this type is define existing community sound environments which are to be protected, and then establish maximum noise levels which may not be exceeded by new land uses locati within these environments.

Both of these planning criteria require documentation of the existing County noi exposure environment. This is discussed below.

III. EXISTING NOISE EXPOSURE ENVIRONMENT

The noise environment in Shasta County is directly related to the pattern c urbanization and associated transportation networks. The noisier locations of th County are in areas with high population densities and the quieter areas of the Count are those locations with low population densities. Because the major urban area c Shasta County is centered around the cities of Anderson and Redding, this area i exposed to the highest noise levels in the County. Here are located the noise source typical of all urbanized areas: highways, freeways, industrial plants, airports quarrying, and aggregate processing operations, etc. Outside of this urbanized area noise is generated almost exclusively by traffic on state highways although scattere lumber mills and off-road vehicles do contribute to the noise environment.

In the SCR Planning Area, the major noise sources are: Interstate 5, Highway 273, th Southern Pacific Railroad, Redding Municipal Airport, and to a lesser extent, Highwa 299 and 44. The existing noise emission levels of transportation sources are shown o the noise contour map of SCR prepared as part of the Plan revisions program. Th scale of this map is 1"=2,000'.

As an example of the relative contribution of these various sources, the day/nigh average noise level (Ldn) is approximately 60 dB at 1,120 feet from the center o Interstate 5. This same noise level is reached at a distance of 700 feet from th Southern Pacific main line. The noise level on a typical residential street wit little or no truck traffic would be less than an Ldn of 60 dB on the sidewalk.

In addition to the transportation noise sources, the urbanized portion of the Count contains many industrial operations primarily lumber or aggregate related. The nois emission of these various operations varies in size and the type of work being done Brief noise measurements made in January of 1981 indicate for example that at 1,50 feet from the Roseburg Lumber Company on Deschutes Road, the average noise level (Leq when the plant is operating, is about 57 dBA. If the plant operated for 24 hours this would be equivalent to an Ldn of 63 dB. Down the road at the Simpson Pape Company, the average noise level was approximately 61 dBA at a distance of 700 fee from the plant, equivalent to an Ldn of 67 dB.

In rural areas of the County, noise levels are dramatically lower away from the majo traffic arterials. For example, a noise measurement made off Big Bend Road about tw miles north of Highway 299 late in the afternoon when no nearby traffic was audible, showed that the average noise level was about 27 dBA. This is an extremely quiet noise environment, one in which you can literally hear a pin drop. After this measurement was taken, a general aviation aircraft flying off in the distance was measured at 45 dBA. This low level of noise sounded loud in such a quiet noise environment. Closer to County roads and State highways the noise environment changes significantly. Table 4 shows the existing day/night noise level at various distances from the state highways in the rural areas of Shasta County.

TABLE 4 (Continued)

HIGHWAY 299
Planning Area - Eastern Upland

Link	Speed	ADT	% Trucks	Ldn at 106'	70 Ldn at	65 Ldn at	60 Ldn at
SCUR Planning Boundary to Ingot	55	2550	12	62.5	—	60'	190'
Ingot to Eastern Upland Planning Boundary/Round Mtn.	55	2550	12	62.5	—	60'	190'

HIGHWAY 299
Planning Area - Big Bend

Link	Speed	ADT	% Trucks	Ldn at 106'	70 Ldn at	65 Ldn at	60 Ldn at
Round Mtn. to Montgomery Ck.	55	2150	16	63	—	66'	215'
Montgomery Ck. to Tamarack Rd/ North East Shasta Co.	55	2150	16	63	—	66'	215'

HIGHWAY 299
Planning Area - North East Shasta Co.

Link	Speed	ADT	% Trucks	Ldn at 106'	70 Ldn at	65 Ldn at	60 Ldn at
Tamarack Rd. To Burney Plumas St.	55	5275	11	65.5	35'	120'	310'
Burney Plumas St. To Pine St. Johnson Park	35	6200	7	61.5	—	46'	150'
Pine St. Johnson Park to Jct. Rte 89	55	3275	14	63	—	66'	210'
Jct. Rte. 89 to Fall River Mills	55	2966	10	62.5	—	60'	190'
Fall River to McArthur	55	3733	9	63.5	—	76'	230'
McArthur to Pittville Rd.	55	3063	11	63	—	66'	210'
Pittville Rd. to Totten Rd.	55	1900	17	62	—	52'	270'
Totten Rd. to Northeast Shasta Planning Boundary	55	1450	22	62	—	52'	270'

IV. NOISE IMPLICATIONS OF COMMUNITY DEVELOPMENT

The development pattern presented in the Community Development Element will change t existing noise exposure environment of Shasta County. The most significant chang will occur in the SCR Planning Area and will be associated with increases automobile traffic. These changes are described below.

A. TRAFFIC NOISE

The increases in automobile traffic projected for the SCR and North East Shas Planning Areas were analyzed to determine their noise impacts. These impacts a measured in two ways. One measure is the increase in the intensity or loudness traffic noise, expressed in decibels (dB). An increase in traffic noise of 3 provides a difference in sound intensity which is just noticeable to the human ea The second measure of sound impacts is concerned with the location of sound contou which express equal levels of sound intensity. Contours are shown at intervals whi relate to the land use compatibility criteria shown in Table 3.

From the perspective of noise impact, the first measure should be examined initial to determine if there is any significant change in the noise environment. If t change is significant, then the second measure becomes important in determining t geographic range of impact. For example, an increase in 2 dB is insignificant and t resulting change in the noise contours is likewise insignificant.

With two exceptions, the results of the traffic noise analysis are shown in Table As indicated by this table, the only significant traffic noise impact will be Placer Road, west of Buena Ventura Boulevard, where the noise level will increase 3 over the existing level and the 60 Ldn contour will expand from 85 feet to 210 fe from the centerline of the road.

Table 5 does not show traffic noise impacts along Lake Boulevard, Route 151 (Shas Dam Boulevard), and Quartz Hill Road. These roads will carry significantly mo traffic than they do today. Because the traffic analysis was done to check capaci of these roads near I-5 where volumes are presently higher than anywhere else on t road, a comparison of the existing and future traffic noise levels at these locatio would be misleading. Greater impacts may occur farther from Interstate 5 where t volumes are presently low. Because of the growth expected in this area, the nois contours for these roads should be addressed in a specific plan.

Table 5 does not address noise impacts along I-5. As noted within the Circulatio Element, future traffic volumes along this and related links in the circulatio network will be the product of the development patterns specified in the General Pla of Shasta County and Redding, A rough analysis of future traffic volumes along I- prepared by the City of Redding indicates that there will be only a small change traffic noise levels south of the City, an increase of approximately 1 dB in the Ld Immediately north of the city, the increase in noise could be as high as 4 dB, b north of the Old Oregon Trail interchange the increase would again drop to less than dB.

TABLE 5 (Continued)

Road: Olinda Road

Link	Speed	ADT	% Trucks	75 Ldn Contour at*	65 Ldn Contour at	60 Ldn Contour at	Increase over Existing Traffic Noise Level
West of Hwy 273	45	1000	1	—** (—)	— (—)	— (—)	NA

*distance from centerline of road
**— indicates that the contour is within the roadway right-of-way
(100) indicates existing contour distances

The only other significant changes in traffic noise levels would occur in the North East Shasta Planning Area. As shown in Table 6, the changes in noise level would be less than 3 dB.

TABLE 6: NORTH EAST SHASTA COUNTY PLANNING AREA NOISE CONTOUR LOCATIONS FOR THE YEAR 2000

Road: Hwy 299

Link	Speed	ADT	% Trucks	75 Ldn Contour at*	65 Ldn Contour at	60 Ldn Contour at	Increase over Existing Traffic Noise Level
Fall River Mills to Burney	55	4100	11	—**	85'	250'	+1 dB
West of Burney to SCUR Boundary	55	3500	11	—**	75' (50')	225' (140')	+2 dB

V. PLANNING ISSUES

There are three major issues facing Shasta County relating to noise. These issues are:

1. What outdoor noise level is appropriate for the various kinds of development planned for Shasta County?

2. What constraints should be imposed on new noise-generating activities to be located in Shasta County?

3. What kind of control procedure should the County adopt to control noise of unusual or sporadic nature that interferes with the daily lives of Shasta County citizens?

The first issue relates to providing a noise environment appropriate to the land use planned. For example, a residential life style is compatible with a lower noise environment while industrial operations are compatible with a higher noise environment. This is not to say that residential uses cannot be made compatible with a higher noise environment. For example, next to a freeway, the erection of noise barriers can reduce the outdoor noise level; however, it does raise the cost of building homes in these areas.

The second issue pertains to controls that the County might impose when permitting the siting of noise-generating activities. Obviously, the location of a lumber mill next to a quiet subdivision could significantly alter the noise environment. The County, through a comprehensive set of policies and the environmental impact process, should be sensitive to the impact of noise on these adjacent uses.

It is difficult to set an absolute criterion for the amount of noise that should be allowed from new noise generating sources locating next to residential areas of other noise sensitive developments. This is primarily because to a large extent, it depends on the existing noise environment in the residential area. In general, the goal of the County should be to not increase the noise environment in a residential area. In no case should the levels be raised above the normally acceptable levels specified in the land use compatibility chart. The best way to deal with this question is through the environmental impact process. It is at this level where the effectiveness and appropriateness of various mitigation measures can be evaluated to determine whether or not a project can be made compatible with the existing noise environment.

Obviously this process should be flexible, because in some areas the trade-off between the increased income will be such that people would opt for the industry and accept somewhat higher noise levels. The goal of the County should be to insure that these impacts are acceptable and are clearly described to adjacent residents.

The final issue deals with the noise problems that commonly occur and which cannot be dealt with through the planning process. Issues such as noise generated by barking dogs, a neighbor using an electric saw to build cabinets late at night, noisy swimming pool pumps, etc. can only be addressed through the adoption of a County-wide quantitative noise ordinance which sets limits on the amount of noise which can be created in different land use designations.

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